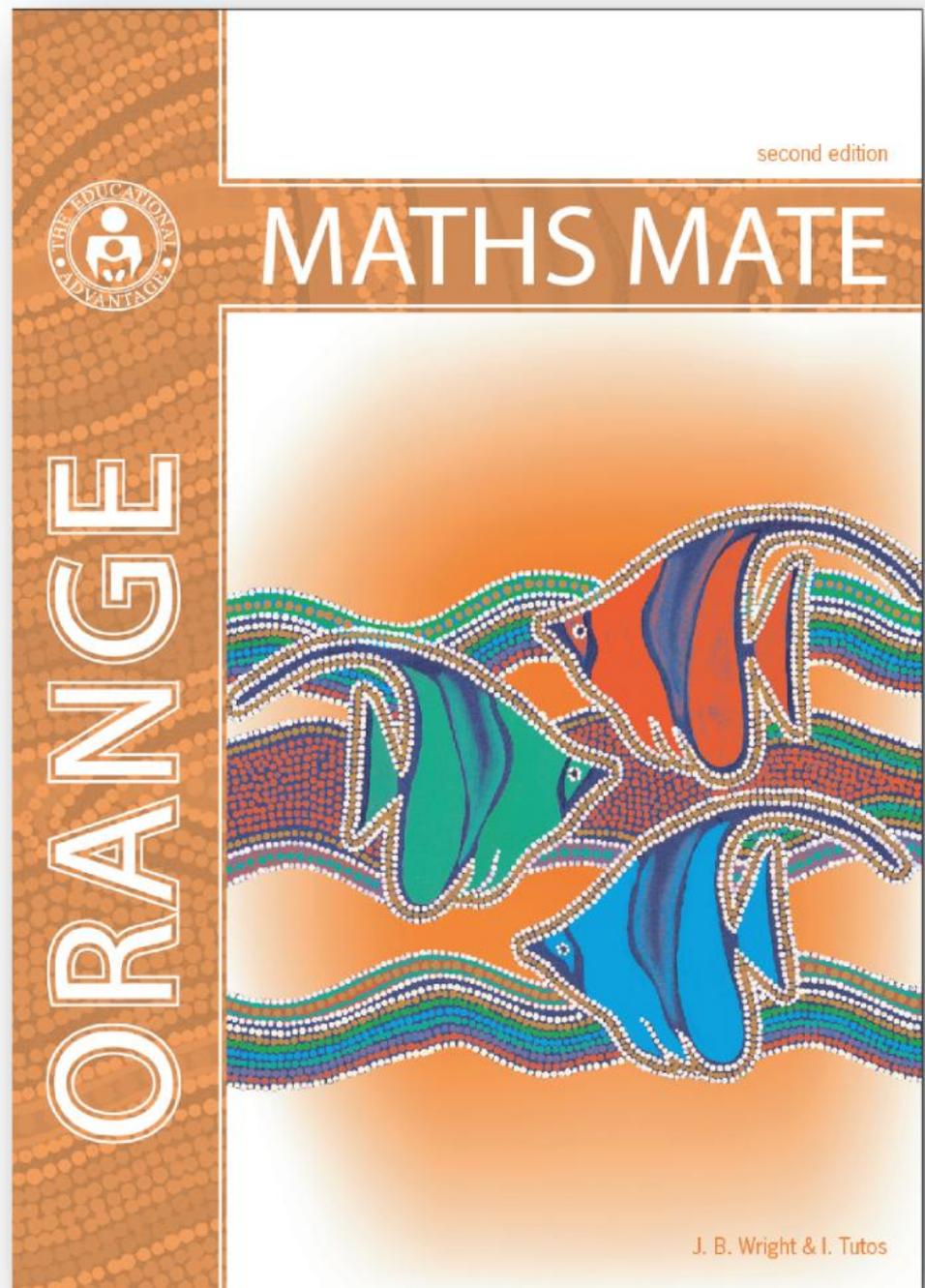


# MATHS MATE

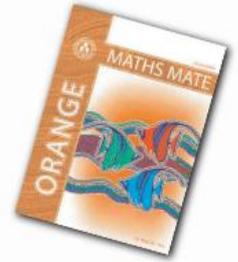


second edition



# MATHS MATE

## Teacher Resource Orange (Maths Mate year 3)



- ▶ Teacher's Guide to the Use of Maths Mate
- ▶ Student Workbook Answers
- ▶ Student Workbook Short Answers
- ▶ Problem Solving Hints & Solutions
- ▶ Test Masters
- ▶ Test Answers
- ▶ Record Keeping Sheets
  
- ▶ For your free Skill Builder Orange/Rose contact us:  
**[info@mathsmate.net](mailto:info@mathsmate.net)**

ORANGE

# MATHS MATE



## Teacher Resource



### **Teacher's Guide to the Use of Maths Mate**

pages i - viii



### **Student Workbook Answers**

pages 3 - 72



### **Student Workbook Short Answers**

pages 1 - 8



### **Problem Solving Hints & Solutions**

pages 1 - 19



### **Test Masters**

pages 1 - 32



### **Test Answers**

pages 1 - 32



### **Record Keeping Sheets**

pages 1 - 10

This Teacher Resource PDF  
comes with a limited  
**Lifetime Update Guarantee.**

Each time a new edition of the  
Maths Mate Program is released,  
an **upgrade** for your  
**Teacher Resource PDF is available**  
**FREE\* of charge**  
when you contact us direct.

This ensures that each teacher can have the latest edition without your school having to incur any further costs. We have chosen to do this to demonstrate the strength of our belief that access to a Teacher Resource PDF is important in the smooth running and success of the programme.

\* The free Teacher Resource PDF is limited to schools that continue to purchase at least 25 student workbooks.





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J. B. Wright & I. Tutos

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### Preface

The Maths Mate Review Program is designed to be used in schools by students from years 3 to 10 (Australia) and years 4 to 11 (New Zealand). Emphasis is placed on the review and gradual development of basic skills.

It is not expected that all students will be able to complete every question from week one. Some questions have been designed to offer a real challenge. However, a major strength of the program is that students are consistently confronted with problems relating to their understanding of the same basic skill, encouraging them to see the need to master that skill in order to progress.

### RECOMMENDED GRADE / YEAR LEVEL INDICATOR

	AUS 1	2	3	4	5	6	7	8	9	10	11	12
Orange Student Workbook - 2nd Ed.												
Rose Student Workbook - 2nd Ed.												
Yellow Student Workbook - 5th Ed.												
Red Student Workbook - 5th Ed.												
Blue Student Workbook - 6th Ed.												
Green Student Workbook - 6th Ed.												
Mauve Student Workbook - 6th Ed.												
Coffee Student Workbook - 3rd Ed.												
Lime Student Workbook - 6th Ed.												
Silver Student Workbook - 3rd Ed.												

NZ Y2 Y3 Y4 Y5 Y6 Y7 Y8 Y9 Y10 Y11 Y12 Y13

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### Maths Mate Orange cover painting

Banner Fish - 2003  
 Acrylic on canvas 45 x 60 cm  
 by Australian artist Susan Betts - Kokata, Mirning and Wirangu.

'Banner Fish' was purchased by The Educational Advantage who have been kindly given permission to reproduce the painting. This contemporary Aboriginal artwork combines traditional and modern techniques. Susan's rich and vibrant art reflects the Australian landscape and wildlife, both flora and fauna.

# PREFACE

## The Author

Joseph Wright has taught in a number of schools throughout Australia and also in the United States of America. His experiences led him to the firm belief that there was a real need for a Mathematics program which was based on a constant review of the basic skills which students acquire. The Maths Mate Program was designed to meet that need.

## Acknowledgements

"The completion of this project was made possible by the hard work and inspiration of Joanna Tutos and Lou McKenna. Thanks to John and Wilma McCormack and the many colleagues and friends who contribute to the overall program. Special thanks to my wife Trish and our children, Peter, David, Rebecca, Paul and Anthony for their investment of time, energy, encouragement and faith."



## Preface

The Maths Mate Program has been designed to be used in schools by students from Years 3 to 10 (Australia) and Years 4 to 11 (New Zealand). Emphasis is placed on the review and gradual development of basic skills so that students keep their skills up to date and teachers need to spend less class time on revision when starting new or subsequent topics.

The program is designed to have students complete eight worksheets each term. It is not expected that all students will be able to complete every question from week one. Some questions have been designed to offer a real challenge. However, a major strength of the program is that students are consistently confronted with problems dealing with their understanding of the same basic skills, encouraging them to see the need to master those skills in order to progress.

Maths Mate is a very comprehensive program which is not only structured to help students see a logical progression in their work but also to make life easier for teachers. Easy to use record keeping sheets have been provided on the Teacher Resource PDF. The tests, which are given twice a term, provide a very good indication of individual student strengths and weaknesses and this information can also be very valuable for addressing specific problems as well as assessing progress.

## Aims of the Maths Mate Program

- Provide students with regular work that helps maintain and develop skills acquired throughout the year.
- Present a structured approach so that students can see their development in specific skill areas.
- Encourage students to take responsibility for their own learning.
- Provide a challenging level of work for all students.
- Encourage parental involvement in the learning process.
- Assist teachers in the diagnosis of student strengths and weaknesses.
- Provide teachers with a concrete method of assessing students' effort and progress on a regular basis.
- Provide a consistent review program which ensures students are regularly being exposed to the Mathematical skills appropriate to their ability level.

A Teacher's Guide to the successful Implementation of the  
**MATHS MATE PROGRAM**

The Maths Mate Program offers many valuable benefits, including the aspects of parental involvement, systemised revision, individual and group diagnostics, enhanced professional standing for teachers, and most importantly, improved efficiency in student learning. However, a number of these factors may be negated or even lost if an individual teacher or school does not effectively implement the program. The Maths Mate Program was designed with an awareness of the increasing time demands placed on classroom teachers by ever-changing curriculum development and more involved assessment and reporting procedures. Maths Mate is a dynamic tool for classroom teachers designed to effectively improve student outcomes in Mathematics, to report accurately on these and to do so within a manageable time frame.

This guide was written to assist with the implementation of Maths Mate. This first page sets out the planning and preparation required by the Head of Mathematics and/or Maths Mate Coordinator, where one is appointed, before beginning the program. The following pages are a guide for classroom teachers using the program.

**SUGGESTIONS FOR PREPARATION AND ORGANISATION:**

**Make sure parents are given advanced notice of the implementation of the Program.** This might include an introduction at Parent Information meetings at the end of the year in preparation for the next.

**At the start of the new school year a letter should be sent home to parents** (see PDF ~ Teacher's Guide to the use of Maths Mate, or the editable word.doc, or [www.mathsmate.co.nz](http://www.mathsmate.co.nz) ~ Downloads). Parental involvement should be encouraged. Their checking to see that work is completed weekly, and their signing of each sheet, should be stressed as important to the program's success. (A follow up reminder later in the year should also be considered.)

**If you are fortunate enough to have audio visual screens in your classrooms, you might consider showing the answers from the Student Workbook Answers PDF files.**

**Thoroughly brief teachers on the use and advantages to them of the Maths Mate Program.** Greater commitment will be given by all teachers if they are aware of the goals underlying the program and have a thorough understanding of the most efficient ways of implementation.

**Give a demonstration of marking and recording procedures, and the potential use of Skill Builders, as an inservice exercise prior to the start of the school year.** The pages that follow may be of assistance here.

---

**Important:** If the school has purchased the student workbooks for the students, you may be able to organise the separation of the workbooks (see page iv) prior to the start of the year, perhaps even at the end of the current year.

**Reminder:** The Teacher Resource PDF will be replaced free of charge when a class set of a revised edition is purchased.



It is often possible for The Educational Advantage to send a representative of the Maths Mate Program to visit your school. Should you consider this assistance advantageous, please contact us to arrange a visit.

Phone: 03 9899 9065 (Australia)

Email: [info@mathsmate.net](mailto:info@mathsmate.net)

Phone: 07 929 4063 (New Zealand)

Email: [info@mathsmate.co.nz](mailto:info@mathsmate.co.nz)

## A Teacher's Guide to the Use of the MATHS MATE PROGRAM

The effective use of Maths Mate requires some good house-keeping on the part of teachers involved.

### STARTING THE YEAR:

Each student will receive a Maths Mate Student Workbook appropriate to his or her level. This workbook will contain 32 worksheets of increasing difficulty. (Having 8 worksheets per term allows some flexibility to schools.)

**Collect the workbooks from the students on the first day of the year.** Use a class list to be sure that any student who has not yet obtained a copy is identified.

**Organise for the pages of the student workbooks to be separated so that class sets of each worksheet can be placed in manila folders or plastic pockets for distribution to students on a weekly basis.** (The help of teacher assistants, students or a parent support group may be useful here.) This avoids problems with a student losing a workbook and having trouble completing Maths Mate work for the remainder of the year. The covers can be used as a colourful divider to mark a section for Maths Mate work should the students be using a binder.

**At the start of the year, brief your class on the advantages of the program.** 'Sell' them the gains they can make with its effective use. Emphasise that, because of the nature of human memory, this program with its systematic, cyclic revision allows for maximum 'absorption' of learned procedures and for the strong reinforcement of important skills. These skills are a necessary prerequisite to problem-solving. Also explain that this is one of their responsibilities in the 'Teaching-Learning Process' and that as they progress further through the educational system, they will need to accept greater personal responsibility for their own learning.

**Ensure that you take the time to fully explain the use of the program, how it will be marked, the recording process of results and the diagnostic benefits of those results for identification of appropriate *Skill Builders*.**

**See that each child receives a letter to parents informing them of the Maths Mate Program.** Stress the parental involvement and the need for signatures on each sheet and see that you collect all the return slips for your class.

**When submitting work, students might be asked to attach a separate sheet showing appropriate steps in their working.** If the question can be answered in a single step, there is little to be gained from asking students to copy the question. If an intermediate step is required to obtain the answer, the student should set the question out appropriately. Such questions are marked with an asterisk ' \* ' to indicate to students that working is expected to be shown.

**Emphasise that all problems on the worksheets and test sheets are designed to be attempted without the aid of a calculator.** Students are unlikely to become confident Mathematicians if they do not have a reasonable background of basic skills.

**It is important to explain your expectations to the class.** Naturally these will be relative to their level of mathematical ability. Some class members may be expected to attempt all questions including the problems at the end whereas others may only be expected to complete the sheets in part (but encouraged to go further when possible).

**Also explain that the material covered in each worksheet may not necessarily reflect the work being undertaken in class at the time.** The work covered by the Maths Mate Program should, with minor exceptions, be revision of work introduced in previous years of study. The exceptions will depend to some degree on the background of your students.

**Tell the students that there is a 'Mate' 😊 hiding on every Maths Mate worksheet. The trick is to find it!**

STARTING EACH TERM:

**At the start of every term give each student a new *Worksheet Results* sheet located at the beginning of each term in the *Student Workbook*.** Explain the importance of the upkeep of this document and how it may be used to identify which skills they have acquired and which skills they still need to learn and practise. Introduce the availability of *Skill Builders*. Providing a new sheet each term gives you a chance to further encourage students to make a fresh start and to set new goals for the term.

**A hard copy of this profile sheet is best kept by the class teacher and handed back to the students every week for them to update during the correction process.** Extra copies can be made for those students who would like to have a copy of their own to show their parents (see PDF ~ Record Keeping Sheets, pages 1 to 4, or [www.mathsmate.co.nz](http://www.mathsmate.co.nz) ~ Downloads).

WEEK - TO - WEEK:

**Get the students into a routine early. Assign the Maths Mate worksheet at the same time each week and have it returned on the same day the following week.**

**On the date worksheets are due, the teacher and students correct answers together in class.** When marking, have students correct their own work by reading the answers to them or use an overhead screen. Having students correct their own work is less about saving the teacher's time for more important work, but more about building the process of developing in students responsibility for their own learning. It also means that students end up with a much clearer idea of the areas in which they need to concentrate their efforts.

**When giving the answers, avoid pausing to discuss the answers at this stage.** By using the numbered squares at the base of the worksheets to record correct responses, the time taken to transfer results to the *Worksheet Results* sheet can be minimised (see Fig. 1). The squares at the base of each worksheet can be rotated and aligned with those on the *Worksheet Results* sheet to enable a quick transfer of the correct responses.

**MATHS MATE**  
 Name: Jacinta Ryan  
 Class: 3/4M  
 Teacher: Miss Macleod

Worksheet Results  
 Term 1

1. [Counting]	1	1	1	1	1,2,3	1	1	1	1	1,4,10
2. [Addition / Subtraction]	2	2	2	2	2,2,3,4	2	2	2	2	2,5,12
3. [Multiplication / Division]	3	3	3	3	3,3,12	3	3	3	3	3,4,13
4. [+ Whole Numbers]	4	4	4	4	4,2,3,4,5,6	4	4	4	4	4,2,3,4,5,6
5. [- Whole Numbers]	5	5	5	5	5,2,3,4,5,6	5	5	5	5	5,2,3,4,5,6
6. [x Whole Numbers]	6	6	6	6	6,2,3,5,6	6	6	6	6	6,4,5,6
7. [÷ Whole Numbers]	7	7	7	7	7,2	7	7	7	7	7,3
8. [Word Problems]	8	8	8	8	8,1,2,3,4	8	8	8	8	8,1,2,3,4
9. [Fractions]	9	9	9	9	9,2,4	9	9	9	9	9,3,6
10. [Place Value]	10	10	10	10	10,1,2	10	10	10	10	10,3
11. [Word Numbers]	11	11	11	11	11,1,2	11	11	11	11	11,1
12. [Money]	12	12	12	12	12,1,2	12	12	12	12	12,3
13. [Number Patterns]	13	13	13	13	13,1	13	13	13	13	13,2
14. [Time]	14	14	14	14	14,1,2	14	14	14	14	14,3
15. [Measuring]	15	15	15	15	15,1	15	15	15	15	15,2
16. [Shapes]	16	16	16	16	16,1	16	16	16	16	16,2
17. [Location]	17	17	17	17	17,1,2	17	17	17	17	17,3
18. [Statistics / Probability]	18	18	18	18	18,4	18	18	18	18	18,6
19. [Problem Solving 1]	19	19	19	19	Hints & Solutions	19	19	19	19	Hints & Solutions
20. [Problem Solving 2]	20	20	20	20	Hints & Solutions	20	20	20	20	Hints & Solutions
21. [Problem Solving 3]	21	21	21	21	Hints & Solutions	21	21	21	21	Hints & Solutions
Total Correct	16	16	17	18						

page 1 © Maths Mate Orange - Record Keeping Sheets

**Should there be need for explanation of one or more answers or perhaps how a problem was solved, you can decide on the relative worth to the class and commit appropriate time on that basis.** After the correction has been completed, it can be valuable to spend time on a problem that has clearly attracted the class's attention while they are focused on it and their interest is high. On the other hand, care needs to be taken to ensure extended periods of time are not spent catering to individual needs with the bulk of the class waiting.

**Remember to check the *Problem Solving Hints & Solutions* (see PDF ~ Problem Solving Hints & Solutions, pages 1 to 19).** They supply teachers with ready answers to the more challenging problem solving questions found at the end of each Maths Mate worksheet. They also contain helpful hints for developing students' problem solving skills.

**Have the students fill in their *Worksheet Results* sheets and select a relevant *Skill Builder* sheet if appropriate.** *Skill Builder* links are listed beside each set of four worksheets (see Fig. 1). Students should work through the *Skill Builders* in order. Where possible the skills are arranged in increasing degree of difficulty. Be aware that some skills may require the knowledge of previous skills. Generally when a student has several areas of weakness, he or she should work on the lowest numbered question first. For example, students struggling with Q3 and Q6 will need to build skills required for Q3 before they can improve Q6.

Fig. 1 - Sample *Worksheet Results* sheet

**1. [Counting]**

Skill 1.1 Counting objects

Orange 1 22 33 44  
Rose 11 22 33 44

- Decide on a movement e.g. left to right / top row first.
- Touch each object.
- Count out loud.

Q. How many bows are there? **A. 9**

a) How many dolphins are there? **7**

c) How many frogs are there?

e) How many hay bales are there?

g) How many fish are there?

b) How many presents are there?

d) How many teddies are there?

f) How many ducks are there?

h) How many starfish are there?

page 1 www.mathsmate.co.nz © Maths Mate Orange/Rose Skill Builder 1

Fig. 2 - Sample Skill Builder sheet

Understand that any question on the Maths Mate worksheets is part of a set of four similar questions in the term. For example, consider sheets 1, 2, 3 and 4 in MM Orange (year 3) term 1. Question 10 on each sheet is similar in design, content and degree of difficulty. This grouping of question style is also true for the next set of four worksheets and so on. Thus the Maths Mate tests (see PDF ~ Test Masters, pages 1 to 32) also reflect this grouping of question style and substance. Generally too, the Skill Builders can be linked to each set of four similar questions. These links are identified, not only on the Worksheet Results sheet but also on the grid at the title of each Skill Builder (see Fig. 2). Both references should be helpful for the allocation of Skill Builders to students.

Collect the students' Maths Mate worksheets and attached working, the Worksheet Results sheets and any completed Skill Builders.

Enter Maths Mate results onto your Worksheet Record, see Fig. 3 (see also PDF ~ Record Keeping Sheets, pages 7 to 10, or www.mathsmate.co.nz ~ Downloads). Firstly, a record of the total number of correct answers for each week can be written. The presence of a parent's signature may also be noted to monitor whether work was attempted by the student at home. Late work can also be noted. This system is explained at the base of the Worksheet Record sheet. Finally, a record of any Skill Builder completed or reward given to the student for good or improving work might be noted.

It is important that students are encouraged to complete every Maths Mate worksheet to maintain the effectiveness of the program.

Skill Builders are available to students, teachers and parents from the Maths Mate websites www.mathsmate.net and www.mathsmate.co.nz The Skill Builders extensively target through instruction and practice, all skills within the related Maths Mate Program except the problem solving questions. The Skill Builders also contain a Glossary of important facts and reference material that will provide instant help when students experience difficulties. Parents could be reminded of their access to this facility.

**MATHS MATE** Worksheet Record

Term 1

Class: 3/4M Teacher: Miss Macleod

Worksheet Number	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8
1 ASHTON Darcy	15 ✓							
2 BAKER Stobhan	18 × L 1							
3 BOURKE Louise	16 ✓ 6							
4 CROSS Chris	14 ✓ 4							
5 DWYER Jim	20 × 15							
6 FIORE Ella	18 ✓							
7 FREEMAN Warren	17 ✓ 18							
8 HAHN Kim	21 ✓							
9 HU Joanna	20 ✓							
10 JILBERT Luke	19 × L 12							
11 KEUNEMAN John	15 ✓							
12 McKENNA Joseph	18 ✓ 13							
13 MOYLE Brendan	14 ✓ 13							
14 MOYLE Emily	17 ✓ 16							
15 NESBIT Peter	21 × L 17							
16 RYAN Jacinta	15 ✓ 4							
17 RYAN Madeline	15 ✓ 14							
18 SETON Elizabeth	19 ×							
19 TUTOS Alexander	20 ✓ 13							
20 WINKELS Tim	19 × 5							
21 WRIGHT Anthony	18 ✓ 13							
22 WRIGHT Paul	20 ✓							
23 YEO Tania	20 ✓							
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								

✓ - Signed by parent L - Work handed in late × - Not signed by parent

page 7 © Maths Mate Orange - Record Keeping Sheets

Fig. 3 - Sample Worksheet Record sheet

AFTER EVERY FOUR WORKSHEETS:

**Tests are given twice a term.** These tests take the same format as the worksheets and are based on the previous four worksheets. A and B tests are provided to allow alternate students to have a different test, thereby ensuring scores accurately reflect the student's own work. (The two tests can be distinguished by their label at the base of the second page, e.g. Orange~Test 3A and Orange~Test 3B.) The tests serve a number of purposes. They give the teacher a more accurate indication of the student's abilities in conditions where the child does not have the assistance of a parent or tutor. They also help to motivate students to correct their work accurately and increase their desire to learn the required skills. Without the tests, students may become comfortable with seeking assistance to achieve high scores, unaware of the importance of fully understanding their work.

**It is at this point that teachers record accurately how students are performing in each area of skill.** A *Test Results* sheet is provided (see PDF ~ Record Keeping Sheets, page 5, or [www.mathsmate.co.nz](http://www.mathsmate.co.nz) ~ Downloads). It is expected that one of these forms be completed for each student in the class when recording test results. Again, the numbering system at the bottom of each page helps speed up this process. When administering the tests, it is advisable to have an assignment of some form or a *Skill Builder* worksheet available for students to begin as soon as they complete the test, which may only take 30 minutes for an able student.

TOPIC - TO - TOPIC:

**A periodic check of the Test Results sheets will assist you in evaluating individual or possible class areas of concern.** You can then plan appropriate *Skill Builder* work or advise individual students of concerns (perhaps as a guide to tutoring). It will also give you a valuable indication of the background skills students have before beginning a new topic, allowing you to tailor your lessons appropriately. In fact you are saved from having to pre-test students before each topic. This will result in a considerable saving of class time.

END OF SEMESTER:

**Combined, the Worksheet Results sheet, the Test Results sheet and the Worksheet Record sheet become invaluable for writing reports and for preparing for parent / teacher interviews.** They give a good indication to parents, not only of the child's skills but also of the consistency of their effort and the degree of responsibility they have assumed for their learning. At the end of the year, particularly when moving into a level where streaming occurs or into senior Mathematics classes, these records allow clear comparisons of students to be made across class groups.

MERIT CERTIFICATES:

**Merit Certificates can be used to encourage and reward selected students for consistent work, outstanding results or best of all, for significant improvement.** A master Merit Certificate can be found on the Teacher Resource PDF and can be printed and presented to students at the teacher's discretion.



We are confident you will find the Maths Mate Program a valuable asset to your teaching. We thank all those teachers who have provided feedback on this program and we value further comments and suggestions. Please direct all correspondence to:

Joe Wright  
The Educational Advantage Pty Ltd  
Building 5 / 29 Clarice Road  
Box Hill South VIC 3128  
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Phone: 613 9899 9065  
Email: [info@mathsmate.net](mailto:info@mathsmate.net)  
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Learning Works  
408 Anglesea Street  
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Phone: 647 929 4063  
Email: [info@mathsmate.co.nz](mailto:info@mathsmate.co.nz)  
Website: [www.mathsmate.co.nz](http://www.mathsmate.co.nz)

Dear Parents,

This year, as part of their Mathematics program, all Year 3/4 students will be given a Maths Mate worksheet on a regular basis. There will be 8 worksheets to be completed each term, generally one per week, the exceptions being short or disrupted weeks.

The Maths Mate worksheets have been designed to allow students to attempt all questions without the aid of a calculator, and this should be encouraged at home.

Don't be too concerned if your child finds the initial worksheet difficult. It is not expected that students will be able to complete every question from week one; in fact Q21 has been included to offer a real challenge to all students. Each worksheet is built around a common framework of questions aimed at covering the current Mathematics Curriculum.

While there is room on the worksheet for the recording of answers, this is only intended as a summary of the student's work. An asterisk ' \* ' has been used to indicate those questions where each student has been asked to show his or her working. In these cases the detail normally expected in Mathematics should be included, with all steps in the development of answers clearly shown. This working should be attached to the worksheet and submitted with it.

Corresponding questions on each worksheet cover the same skill area; that is, Q1 always tests counting, Q2, addition / subtraction, and so on with the questions within each category becoming progressively more difficult from week to week.

Students will be confronted by the same type of question on a regular basis. The diagnostic nature of the worksheets will help students and teachers to identify areas of strength and weakness. This should also help to motivate students to make another attempt at mastering skills that they may have found too difficult in the past. As well, the results sheet, if completed accurately, will allow students to enjoy monitoring their own improvement.

If your child is having difficulty with a certain skill, Skill Builders are available to students, teachers and parents from the Maths Mate websites [www.mathsmate.net](http://www.mathsmate.net) and [www.mathsmate.co.nz](http://www.mathsmate.co.nz). The Skill Builders also contain a Glossary of important facts and reference material that will provide students with instant help.

It would be appreciated if you would complete the tear off slip at the bottom of this page so that we can be sure that you are aware of our expectations. We ask also that you sign the completed worksheet each week to acknowledge that your child is working independently and regularly but with your support.

We thank you in anticipation of your involvement and remind you that you are encouraged to call and discuss your child's progress at any time.

Yours sincerely,

Class Teacher

Principal



Maths Mate Program - Return Slip

Student's Name: ..... Class: .....

As a parent / guardian I have signed this form to indicate that I am aware of the Maths Mate requirements expected of my child.

Parent's Signature: ..... Date: .....

Dear Parents,

This year, as part of their Mathematics program, all Year 5/6 students will be given a Maths Mate worksheet on a regular basis. There will be 8 worksheets to be completed each term, generally one per week, the exceptions being short or disrupted weeks.

The Maths Mate worksheets have been designed to allow students to attempt all questions without the aid of a calculator, and this should be encouraged at home.

Don't be too concerned if your child finds the initial worksheet difficult. It is not expected that students will be able to complete every question from week one; in fact Q24 has been included to offer a real challenge to all students. Each worksheet is built around a common framework of questions aimed at covering the current Mathematics Curriculum.

While there is room on the worksheet for the recording of answers, this is only intended as a summary of the student's work. An asterisk ' \* ' has been used to indicate those questions where each student has been asked to show his or her working. In these cases the detail normally expected in Mathematics should be included, with all steps in the development of answers clearly shown. This working should be attached to the worksheet and submitted with it.

Corresponding questions on each worksheet cover the same skill area; that is, Q1 always tests adding whole numbers to 10, Q2, subtracting whole numbers to 10, and so on with the questions within each category becoming progressively more difficult from week to week.

Students will be confronted by the same type of question on a regular basis. The diagnostic nature of the worksheets will help students and teachers to identify areas of strength and weakness. This should also help to motivate students to make another attempt at mastering skills that they may have found too difficult in the past. As well, the results sheet, if completed accurately, will allow students to enjoy monitoring their own improvement.

If your child is having difficulty with a certain skill, Skill Builders are available to students, teachers and parents from the Maths Mate websites [www.mathsmate.net](http://www.mathsmate.net) and [www.mathsmate.co.nz](http://www.mathsmate.co.nz). The Skill Builders also contain a Glossary of important facts and reference material that will provide students with instant help.

It would be appreciated if you would complete the tear off slip at the bottom of this page so that we can be sure that you are aware of our expectations. We ask also that you sign the completed worksheet each week to acknowledge that your child is working independently and regularly but with your support.

We thank you in anticipation of your involvement and remind you that you are encouraged to call and discuss your child's progress at any time.

Yours sincerely,

Class Teacher

Principal



---

Maths Mate Program - Return Slip

Student's Name: ..... Class: .....

As a parent / guardian I have signed this form to indicate that I am aware of the Maths Mate requirements expected of my child.

Parent's Signature: ..... Date: .....

# MATHS MATE



## Teacher Resource



### Teacher's Guide to the Use of Maths Mate

pages i - viii



### Student Workbook Answers

pages 3 - 72



### Student Workbook Short Answers

pages 1 - 8



### Problem Solving Hints & Solutions

pages 1 - 19



### Test Masters

pages 1 - 32



### Test Answers

pages 1 - 32



### Record Keeping Sheets

pages 1 - 10





Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

How many balloons are there?



7

6. [× Whole Numbers]

9 multiplied by 2 is

18

7. [÷ Whole Numbers]

20 shared between 5 is

4

2. [Addition / Subtraction]

Complete the addition.



plus

6 + 5 = 11

8. [Word Problems]

In the wild a lion sleeps for about 13 hours each day. A koala sleeps 9 hours more each day. For how many hours each day does a koala sleep?

[Write the number sentence.]

13 + 9 = 22 h

3. [Multiplication / Division]

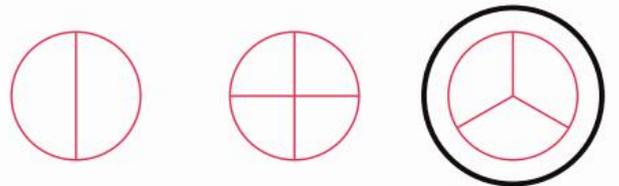
How many groups of 5 books?



5

9. [Fractions]

Circle the picture that shows thirds.

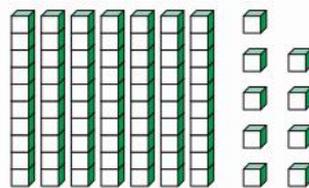


4. [+ Whole Numbers]

6 add on 4 is

10

10. [Place Value]



7 tens 9 ones = 79

5. [- Whole Numbers]

19 subtract 6 makes

13

11. [Word Numbers]

Write in numerals:  
sixteen

16

12. [Money]  
What is the value of the coin?



50 cents

13. [Number Patterns]

2, 4, 6, 8, 10, 12, 14

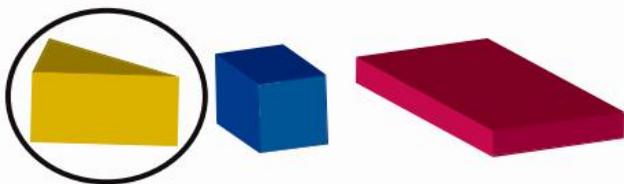
14. [Time]  
Which day comes after Wednesday?

Thursday

15. [Measuring]  
Circle the girl with the longest hair.



16. [Shapes]  
Circle the triangular prism.



17. [Location]  
Is the witch flying 'in front of' or 'behind' the moon?



behind

18. [Statistics / Probability]  
How many moons does Mars have?

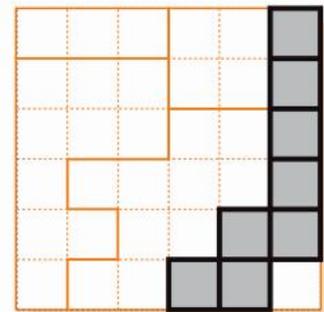
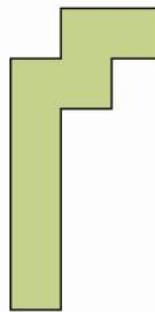
Number of moons

Earth	Mars	Pluto	Venus

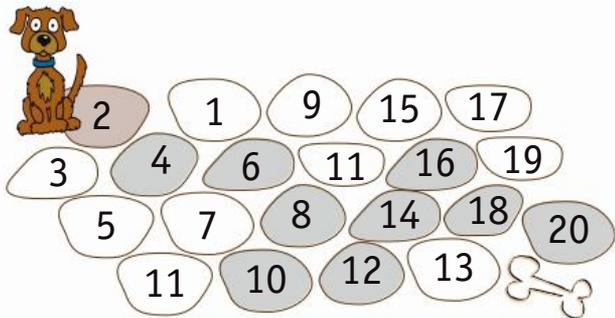
Key: = 1 moon

2

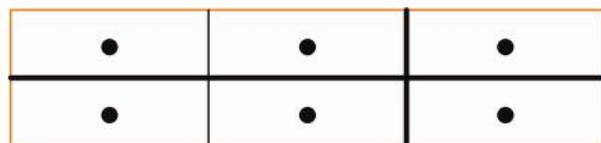
19. [Problem Solving 1]  
Find and colour this shape inside the grid.



20. [Problem Solving 2]  
Start at 2. Colour the path to the bone by counting by 2s.



21. [Problem Solving 3]  
Draw 2 more straight lines to separate the dots so that one dot is in each area. [Hint: A ruler may help.]





Name: .....

Due Date: ...../...../.....

Parent's Signature: .....

1. [Counting]  
How many butterflies are there?



5

6. [× Whole Numbers]  
9 lots of 5 are

45

2. [Addition / Subtraction]  
Complete the addition.



$$7 + 8 = 15$$

8. [Word Problems]  
The first mandarin that Frankie ate had 8 pips, but the second only had 4 pips. How many pips in total?  
[Write the number sentence.]

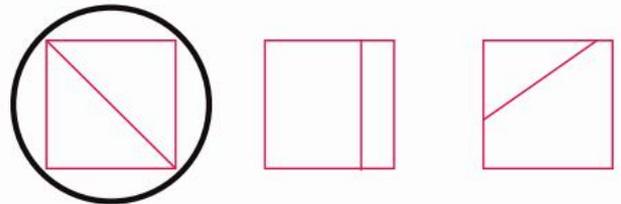
$$8 + 4 = 12$$

3. [Multiplication / Division]  
How many groups of 4 anchors?

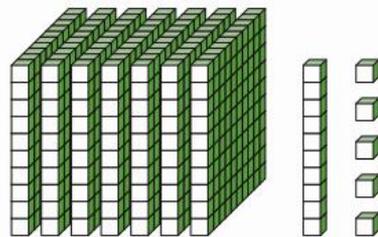


6

9. [Fractions]  
Circle the picture that shows halves.



10. [Place Value]



$$7 \text{ hundreds } 1 \text{ ten } 5 \text{ ones} = 715$$

4. [+ Whole Numbers]  
The sum of 8 and 7 is

15

5. [- Whole Numbers]  
140 minus 10 equals

130

11. [Word Numbers]  
Write in numerals:  
thirty-four

34

12. [Money]  
Circle the coin with the greatest value.



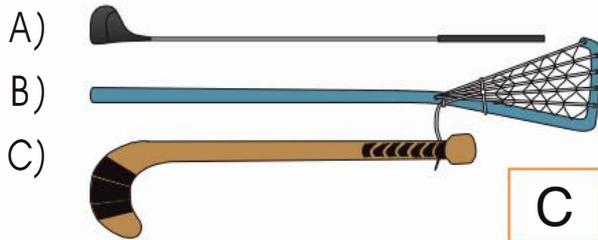
13. [Number Patterns]

7, 9, 11, 13, 15, **17, 19**

14. [Time]  
Which day comes before Sunday?

**Saturday**

15. [Measuring]  
Which stick is the shortest?



16. [Shapes]  
Circle the cylinder.



17. [Location]  
Is the gift 'on' or 'under' the tree?



**under**

18. [Statistics / Probability]  
How much is the loaf of bread?

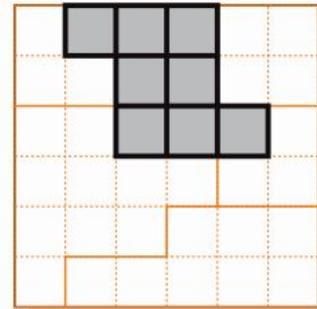
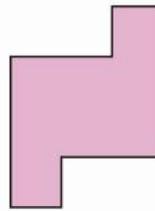
Cost of everyday items

\$	\$ \$ \$	\$ \$ \$	\$ \$ \$

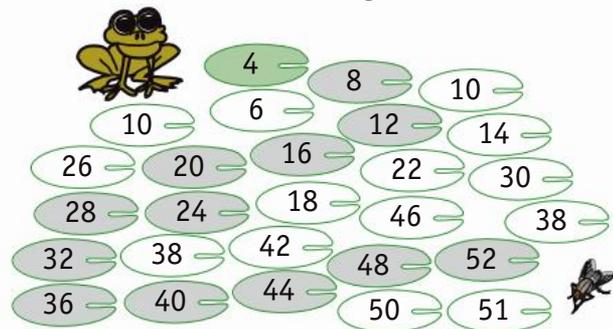
Each \$ = 1 dollar

**3 dollars**

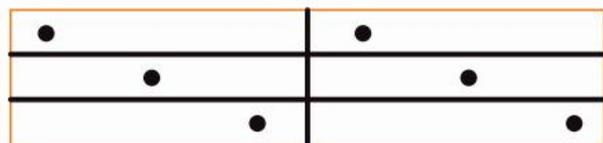
19. [Problem Solving 1]  
Find and colour this shape inside the grid.



20. [Problem Solving 2]  
Start at 4. Colour the lily pad path to the fly by counting by 4s.



21. [Problem Solving 3]  
Draw 3 straight lines to separate the dots so that one dot is in each area. [Hint: A ruler may help.]





Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

How many ghosts are there?



9

6. [× Whole Numbers]

7 times 3 is

21

7. [÷ Whole Numbers]

How many 4s in 32?

8

2. [Addition / Subtraction]

Take away 6.



$$10 - 6 = 4$$

8. [Word Problems]

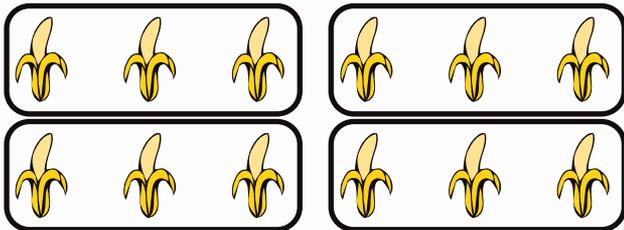
The annual average maximum temperature in the USA is  $17^{\circ}\text{C}$  and in India is  $14^{\circ}\text{C}$  higher. What is the annual average maximum temperature in India?

[Write the number sentence.]

$$17 + 14 = 31^{\circ}\text{C}$$

3. [Multiplication / Division]

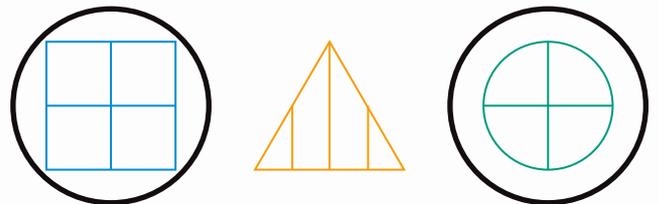
Circle to divide 12 bananas into 4 equal groups. How many in each group?



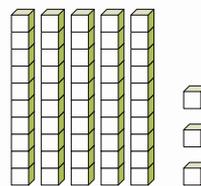
3

9. [Fractions]

Circle the pictures that show quarters.



10. [Place Value]



$$5 \text{ tens } 3 \text{ ones} = 53$$

4. [+ Whole Numbers]

The total of 9 and 3 is

12

5. [- Whole Numbers]

The difference between 23 and 8 is

15

11. [Word Numbers]

Write in numerals:  
seventy-nine

79

12. [Money]  
Circle the coin with the greatest value.



13. [Number Patterns]  
2, 5, 8, 11, 14, **17, 20**

14. [Time]  
Yesterday was Monday. What day is today?  
**Tuesday**

15. [Measuring]  
Which person is likely to be the shortest?  
A) teenager  
B) man  
C) baby  
**C**

16. [Shapes]  
What shape is this object?



**cube**

17. [Location]  
Is the bird 'above' or 'below' the scarecrow?



**above**

18. [Statistics / Probability]  
How many toes does a pig have on each foot?

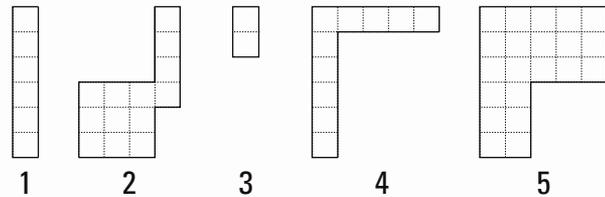
Hoofed animals - Number of toes on a foot

horse	hippo	rhinoceros	pig

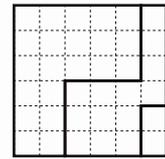
Key: = 1 toe

**4**

19. [Problem Solving 1]

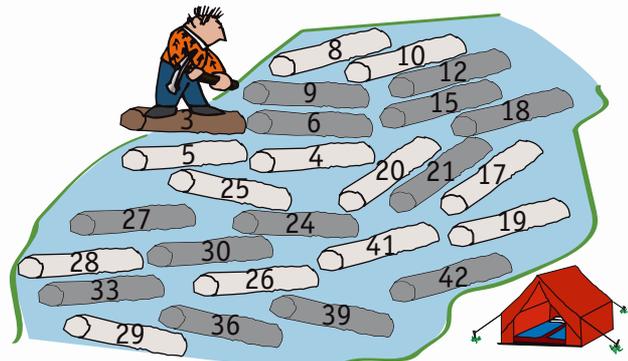


Which shapes were used to complete the square?

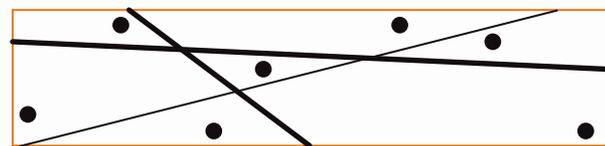


**2**, **3** and **5**

20. [Problem Solving 2]  
Start at 3. Colour the log path across the river by counting by 3s.



21. [Problem Solving 3]  
Draw 2 more straight lines to separate the dots so that one dot is in each area. [Hint: A ruler may help.]



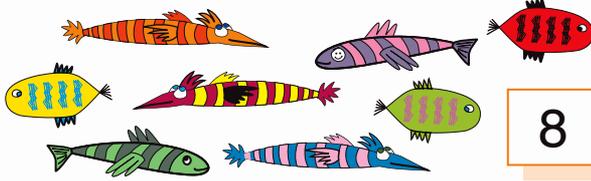


Name: .....

Due Date: ..... / ..... / .....

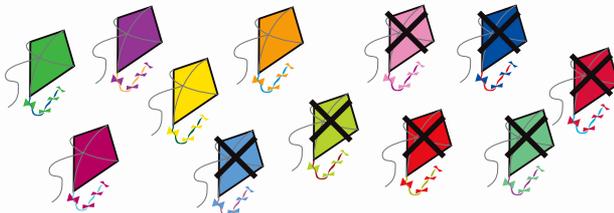
Parent's Signature: .....

1. [Counting]  
How many fish are there?



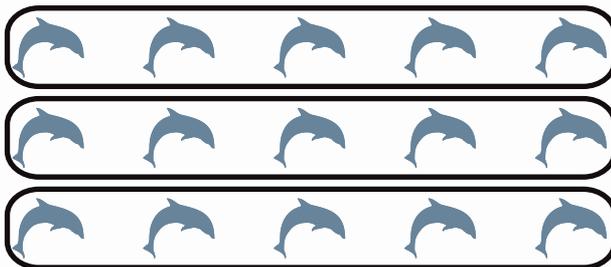
8

2. [Addition / Subtraction]  
Take away 7.



$$12 - 7 = 5$$

3. [Multiplication / Division]  
Circle to divide 15 dolphins into 3 equal groups. How many in each group?



5

4. [+ Whole Numbers]  
7 and 9 together make

16

5. [- Whole Numbers]  
34 take away 7 is

27

6. [× Whole Numbers]  
4 groups of 5 are

20

7. [÷ Whole Numbers]  
21 shared between 3 is

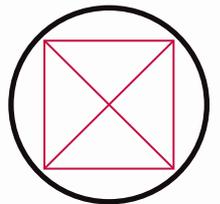
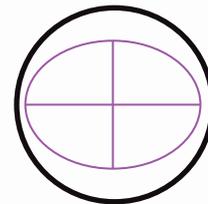
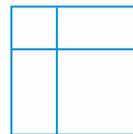
7

8. [Word Problems]  
The maximum capacity of a Boeing 787 is 290 passengers. The maximum capacity of an Airbus A380 is 850 passengers. What is their combined maximum capacity?

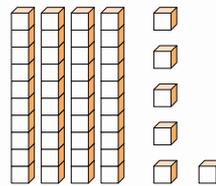
[Write the number sentence.]

$$290 + 850 = 1140$$

9. [Fractions]  
Circle the pictures that show quarters.



10. [Place Value]



$$4 \text{ tens } 6 \text{ ones} = 46$$

11. [Word Numbers]  
Write in numerals:  
ninety-eight

98

12. [Money]  
Circle the coin with the smallest value.



13. [Number Patterns]  
5, 15, 25, 35, 45, **55, 65**

14. [Time]  
Today is Wednesday. What day was it a week ago?

**Wednesday**

15. [Measuring]  
Which is likely to be the longest?  
A) long jump pit  
B) soccer field  
C) lap pool

**B**

16. [Shapes]  
What shape is this object?



**cone**

17. [Location]  
Is most of Santa 'inside' or 'outside' the chimney?



**inside**

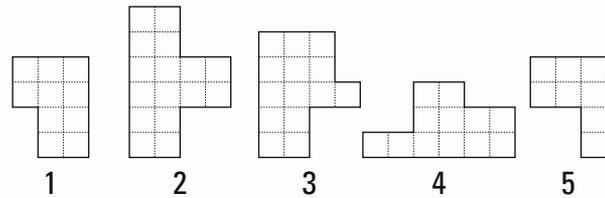
18. [Statistics / Probability]  
How many more gold medals than silver medals did Hungary win in the 2016 Olympics?

**2016 Olympics - Hungary**

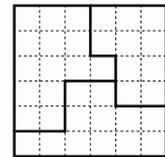


**5**

19. [Problem Solving 1]

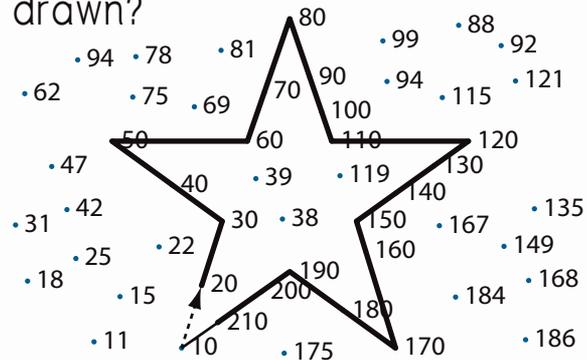


Which shapes were used to complete the square?



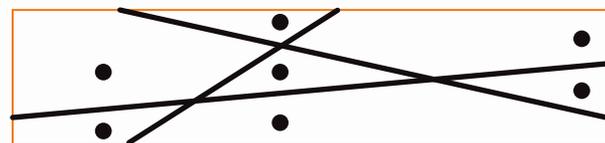
**1, 3 and 4**

20. [Problem Solving 2]  
Start at 10. Connect the dots by counting by 10s. What have you drawn?



**star**

21. [Problem Solving 3]  
Draw 3 straight lines to separate the dots so that one dot is in each area. [Hint: A ruler may help.]





Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

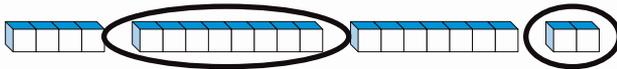
1. [Counting]

Write the numbers before and after 80.

79   80   81

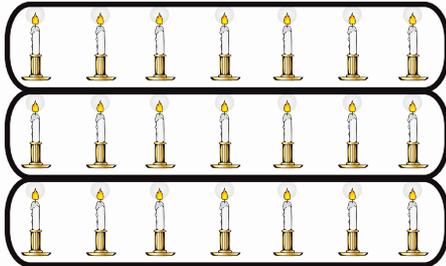
2. [Addition / Subtraction]

Circle two blocks that add to 10.



3. [Multiplication / Division]

Circle to make 3 equal groups.



21 divided into 3 groups = 7

4. [+ Whole Numbers]

	2	5	8	7	10
+ 5	7	10	13	12	15

5. [- Whole Numbers]

	19	15	11	12	10
- 10	9	5	1	2	0

6. [× Whole Numbers]

	3	7	9	12	10
× 3	9	21	27	36	30

7. [÷ Whole Numbers]

50 ÷ 10 = 5

8. [Word Problems]

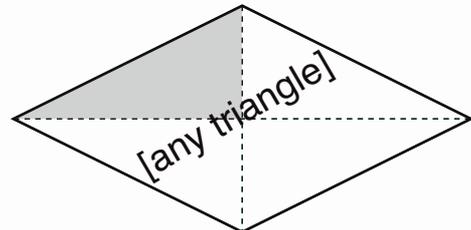
The average Australian class size in 2018 was 25. The average Chinese class size in 2018 was 48. What was the difference between the two class sizes?

[Write the number sentence.]

48 - 25 = 23

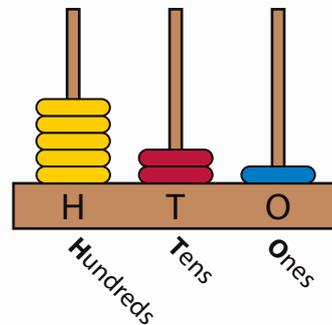
9. [Fractions]

Colour one quarter of the rhombus.



10. [Place Value]

Write the numeral.



521

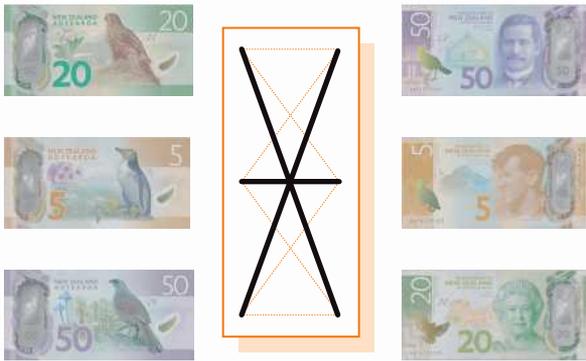
11. [Word Numbers]

Write the number 17 in words.

seventeen

12. [Money]

Match the fronts to the backs of the notes.



13. [Number Patterns]

18, 16, 14, 12, 10, **8, 6**

14. [Time]

Mark this birthday with a star.  
Steven Adams - 28 July

JULY - 2021						
Sun	Mon	Tue	Wed	Thu	1	2
Sun 4	Mon 5	Tue 6	Wed 7	Thu 8	Fri 9	Sat 10
Sun 11	Mon 12	Tue 13	Wed 14	Thu 15	Fri 16	Sat 17
Sun 18	Mon 19	Tue 20	Wed 21	Thu 22	Fri 23	Sat 24
Sun 25	Mon 26	Tue 27	Wed 28	Thu 29	Fri 30	Sat 31

15. [Measuring]

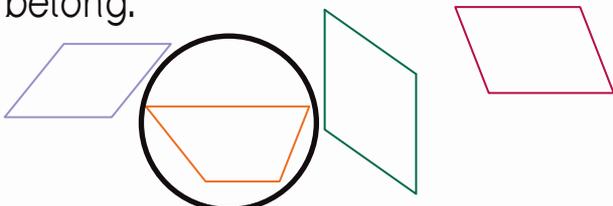
Which animal is likely to weigh the least?



**A**

16. [Shapes]

Circle the shape that does not belong.



17. [Location]

Whose image is to the right of Prince Charles?  
[As seen from your perspective.]



**Albert Einstein**

18. [Statistics / Probability]

What number is shown by the tally marks?



**12**

19. [Problem Solving 1] \*

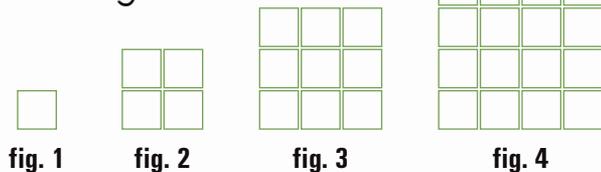
You have \$10. You buy four chocolates. How much change do you receive?



**\$ 1.20**

20. [Problem Solving 2] \*

If you continue the pattern, how many squares would be in the next figure?



**25**

21. [Problem Solving 3] \*

A 'combo' combines one size of popcorn and one size of lemonade. How many different 'combos' are available?

Popcorn	Lemonade
small \$1.50	small \$1.25
medium \$2.50	medium \$2.00
large \$3.00	large \$2.50
jumbo \$4.00	

**12**



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

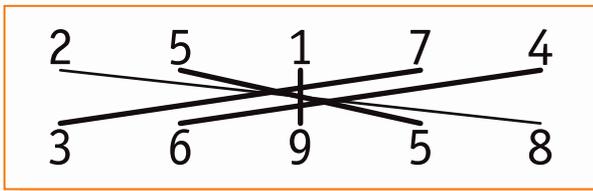
1. [Counting]

Write the numbers before and after 102.

101 102 103

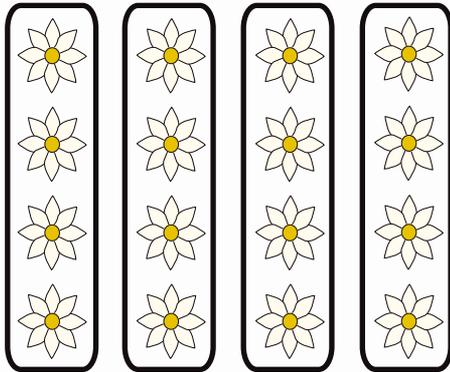
2. [Addition / Subtraction]

Draw lines to join pairs of numbers that add to 10.



3. [Multiplication / Division]

Circle to make 4 equal groups.



16 divided into 4 groups = 4

4. [+ Whole Numbers]

	1	6	4	5	8
+ 8	9	14	12	13	16

5. [- Whole Numbers]

	13	11	6	9	4
- 4	9	7	2	5	0

6. [× Whole Numbers]

	5	9	6	8	3
× 2	10	18	12	16	6

7. [÷ Whole Numbers]

8 ÷ 1 = 8

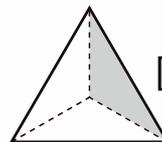
8. [Word Problems]

The stone pedestal of the Statue of Liberty measures 47 metres. If the total height from the ground to the top of the statue is 93 metres, how tall is the actual statue? [Write the number sentence.]

93 - 47 = 46 m

9. [Fractions]

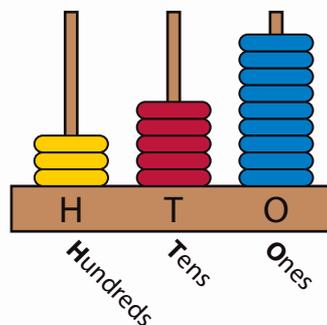
Colour one third of the triangle.



[any small triangle]

10. [Place Value]

Write the numeral.



359

11. [Word Numbers]

Write the number 16 in words.

sixteen

12. [Money]  
What is the value of the note?



10 dollars

13. [Number Patterns]

27, 24, 21, 18, 15, 12, 9

14. [Time]

What is the date of Easter Sunday in 2021?

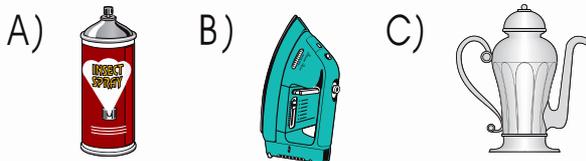
APRIL - 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
4 Easter	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

4/4/2021

OR 4 April 2021

15. [Measuring]

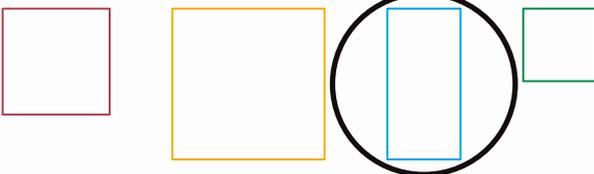
Which container is likely to hold the greatest volume?



C

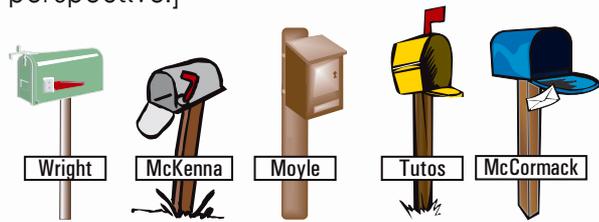
16. [Shapes]

Circle the shape that does not belong.



17. [Location]

Which letterbox is directly to the right of McKenna? [As seen from your perspective.]



Moyle

18. [Statistics / Probability]

What number is shown by the tally marks?



8

19. [Problem Solving 1] \*

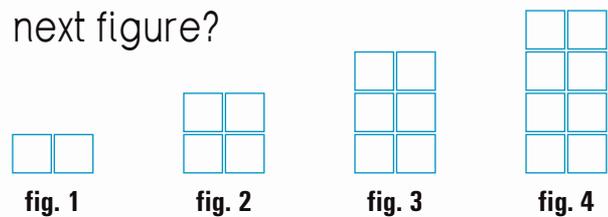
You have \$10. You buy four bread sticks. How much change do you receive?



\$ 1.60

20. [Problem Solving 2] \*

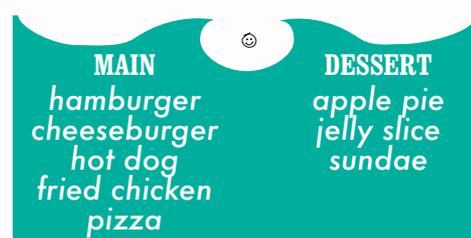
If you continue the pattern, how many squares would be in the next figure?



10

21. [Problem Solving 3] \*

At 'Hungry's' a discount applies when ordering one main and one dessert. How many discount orders are possible?



15



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

Count backwards from 20.

20 19 18 17 16 15

2. [Addition / Subtraction]

Circle the numbers that make 10, then add.

$$\textcircled{8} + 6 + \textcircled{2} = 16$$

3. [Multiplication / Division]

Fill in the gaps.



4 groups of 2 ears = 8 ears

4. [+ Whole Numbers]

	7	3	4	6	0
+ 7	14	10	11	13	7

5. [- Whole Numbers]

	10	6	14	11	15
- 6	4	0	8	5	9

6. [× Whole Numbers]

	2	10	5	11	4
× 8	16	80	40	88	32

7. [÷ Whole Numbers]

$$40 \div 10 = 4$$

8. [Word Problems]

The last two major eruptions of Mount Ruapehu Volcano were recorded in 1945 and 1995. How many years apart were the eruptions?

[Write the number sentence.]

$$1995 - 1945 = 50 \text{ years}$$

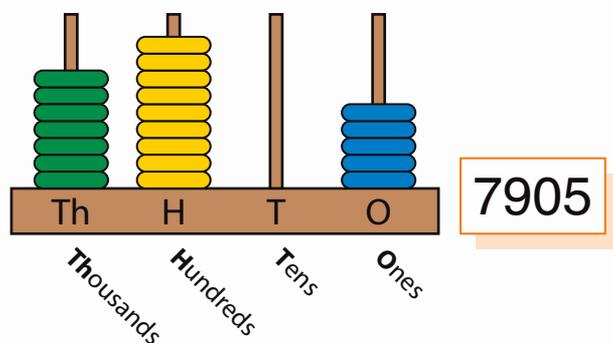
9. [Fractions]

Colour one half of the stars.



10. [Place Value]

Write the numeral.



11. [Word Numbers]

Write the number 45 in words.

forty-five

12. [Money]  
Which note has the greatest value?



C

13. [Number Patterns]

35, 30, 25, 20, 15, 10, 5

14. [Time]

How many Saturdays in February 2021?

FEBRUARY - 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

4

15. [Measuring]

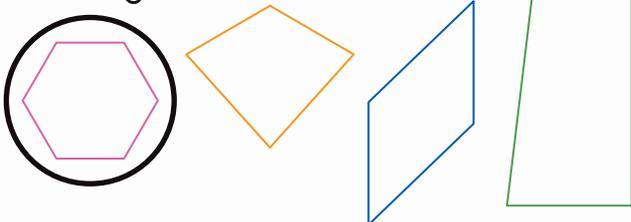
Which object is likely to weigh the most?

- A) a 10¢ coin  
B) a mobile phone  
C) tub of ice cream

C

16. [Shapes]

Circle the shape that does not belong.



17. [Location]

Whose image is to the left of William Shakespeare?  
[As seen from your perspective.]



Mahatma Ghandi William Shakespeare Sir Winston Churchill

Mahatma Ghandi

18. [Statistics / Probability]

Use tally marks (|) to show the number 11.

||||| ||||| |

19. [Problem Solving 1] \*

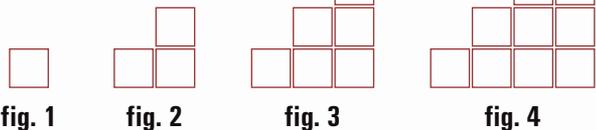
You have \$10. You buy three markers. How much change do you receive?



25 ¢

20. [Problem Solving 2] \*

If you continue the pattern, how many squares would be in the fifth figure?



15

21. [Problem Solving 3] \*

When ordering a smoothie, there is a choice of one flavour and one size. How many different orders are possible?

**SMOOTHIE Delights**

small \$4.00  
large \$6.00

mango  
strawberry  
banana  
orange



8



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

Count on from 208.

208 209 210 211 212

2. [Addition / Subtraction]

Circle the numbers that make 10, then add.

$$5 + (7) + (3) + 8 = 23$$

3. [Multiplication / Division]

Fill in the gaps.



5 groups of 4 notes =

20 notes

4. [+ Whole Numbers]

	2	9	7	5	8
+ 4	6	13	11	9	12

5. [- Whole Numbers]

	13	10	14	9	17
- 8	5	2	6	1	9

6. [x Whole Numbers]

	9	3	12	1	7
x 4	36	12	48	4	28

7. [+ Whole Numbers]

$$7 \div 1 = 7$$

8. [Word Problems]

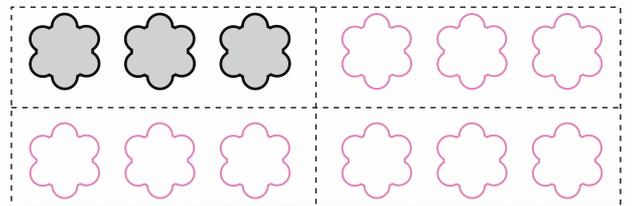
In 2019, the tallest living man in the world was 251 cm tall. How many centimetres shorter is netballer Irene van Dyke who is 190 cm tall?

[Write the number sentence.]

$$251 - 190 = 61 \text{ cm}$$

9. [Fractions]

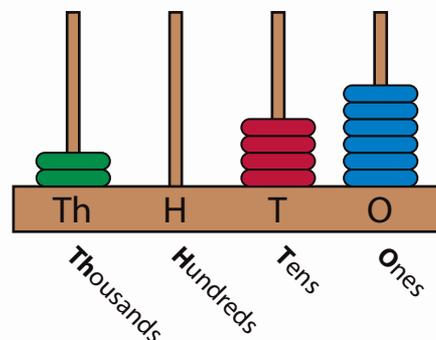
Colour one quarter of the flowers.



[any 3 flowers]

10. [Place Value]

Write the numeral.



2046

11. [Word Numbers]

Write the number 87 in words.

eighty-seven

12. [Money]  
Which note has the smallest value?



**B**

13. [Number Patterns]

90, 80, 70, 60, 50, **40, 30**

14. [Time]

Which day of the week is ANZAC Day in 2021?

APRIL - 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

**Sunday**

15. [Measuring]

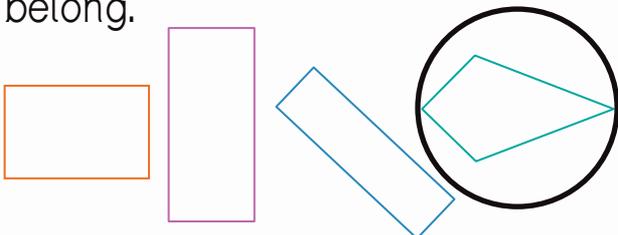
Which object is likely to have the least capacity?

- A) bucket  
B) measuring spoon  
C) sink

**B**

16. [Shapes]

Circle the shape that does not belong.



17. [Location]

Draw sauce on the hotdog in the middle.



18. [Statistics / Probability]

Use tally marks (|) to show the number 9.

Number	Tally
9	

19. [Problem Solving 1] \*

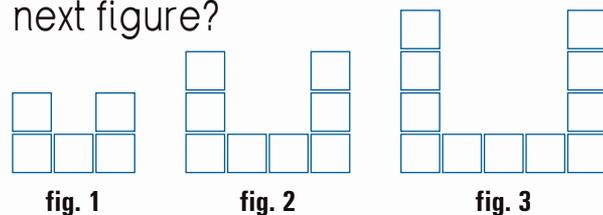
Board shorts cost \$45. How much would you have to pay in a half price sale?



**\$ 22.50**

20. [Problem Solving 2] \*

If you continue the pattern, how many squares would be in the next figure?



**14**

21. [Problem Solving 3] \*

At the Year 4 camp, students choose one sport and one activity. How many combinations are possible?

SPORT	ACTIVITY
• swimming	• archery
• running	• rock climbing
• cycling	• flying fox
• baseball	• abseiling

**16**



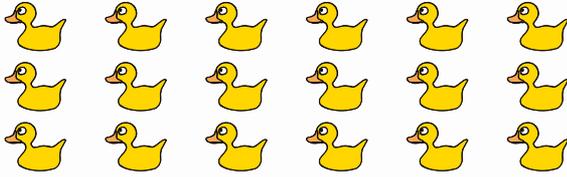
Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

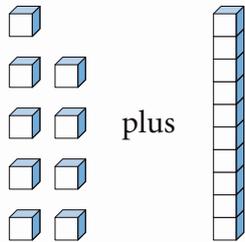
Count by 3s.



3 6 9 12 15 18

2. [Addition / Subtraction]

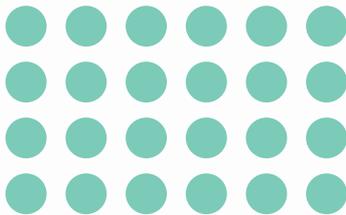
Complete the addition.



$$9 + 10 = 19$$

3. [Multiplication / Division]

Complete the multiplication.



4 rows of 6 =

$$4 \times 6 = 24$$

4. [+ Whole Numbers]

	7	10	6	15	8
+10	17	20	16	25	18

5. [- Whole Numbers]

$$55 - 21 = 34$$

6. [× Whole Numbers]

	7	4	8	10	2
× 3	21	12	24	30	6

7. [÷ Whole Numbers]

$$48 \div 6 = 8$$

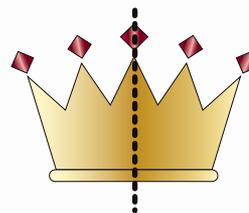
8. [Word Problems]

A water-saving toilet uses 3 litres of water for every half flush. How much water is used in a day, if the toilet is flushed 9 times?  
[Write the number sentence.]

$$9 \times 3 = 27 \text{ L}$$

9. [Fractions]

Draw a line to divide the crown into halves.



10. [Place Value]

Expand 805.

8 hundreds 0 tens 5 ones

11. [Word Numbers]

Write in numerals:  
seventy

70

12. [Money]  
How much money in total?



\$ 1.50

13. [Number Patterns]  
10, 13, 16, 19, 22, \_\_\_\_\_

25, 28

14. [Time]  
Which month comes after April?

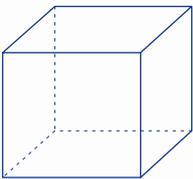
May

15. [Measuring]  
A horse weighs:

- A) less than a kilogram
- B) about a kilogram
- C) more than a kilogram

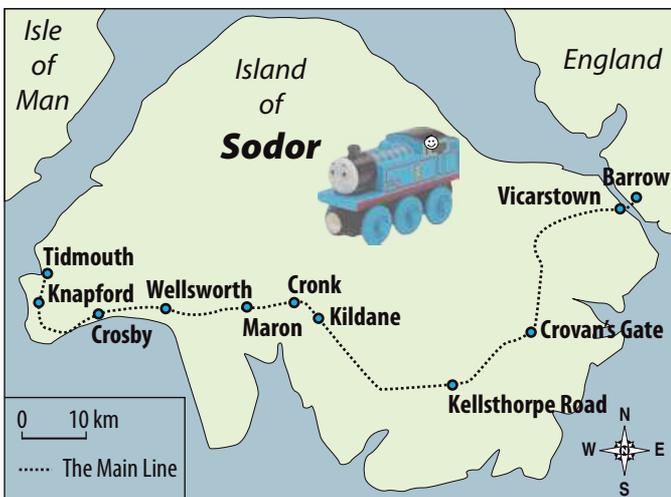
C

16. [Shapes]  
What shape is the face of a cube?



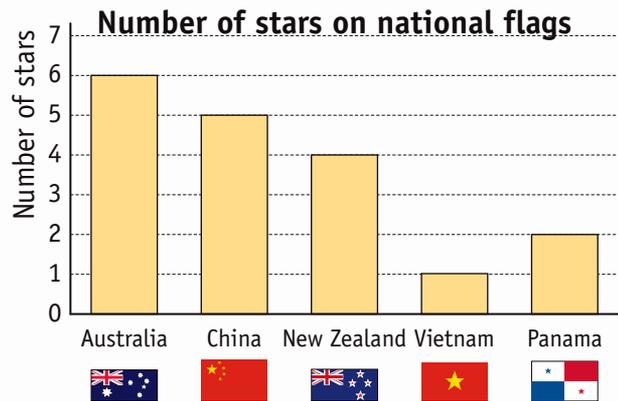
square

17. [Location]  
Which station is furthest along the main line from Barrow?



Tidmouth

18. [Statistics / Probability]  
Which country has a flag with 4 stars?



New Zealand

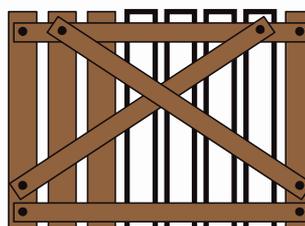
19. [Problem Solving 1] \*  
Bill began at 30 and skip counted by threes. Would he say 54?

yes

20. [Problem Solving 2] \*  
What number am I?  
I am a 2-digit number.  
I have a 4 in the units place.  
The other digit is twice as big.

84

21. [Problem Solving 3]  
How many pickets have fallen off the gate?



4



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]  
When counting by 5s, what is the next number?  
5, 10, 15, 20, 25, 30, **35**

2. [Addition / Subtraction]  
Complete the addition.

plus

**42** + **100** = **142**

3. [Multiplication / Division]  
Complete the multiplication.

2 rows of 10 =

**2** × **10** = **20**

4. [+ Whole Numbers]

	10	15	9	6	11
+ 6	16	21	15	12	17

5. [- Whole Numbers]

49 - 28 = **21**

6. [× Whole Numbers]

	4	10	8	3	6
× 2	8	20	16	6	12

7. [+ Whole Numbers]

28 ÷ 4 = **7**

8. [Word Problems]

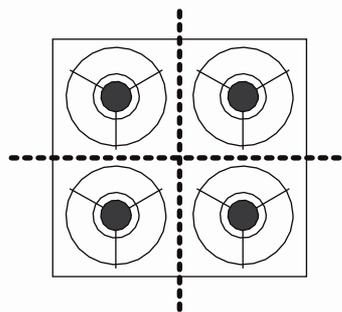
A water-saving shower uses 10 litres of water per minute. How much water is used in a 5-minute shower?

[Write the number sentence.]

**5 × 10 = 50 L**

9. [Fractions]

Draw lines to divide the stove top into quarters.



10. [Place Value]

Expand 637.

**6 hundreds 3 tens 7 ones**

11. [Word Numbers]

Write in numerals:  
forty

**40**

12. [Money]

How much money in total?



90 ¢

13. [Number Patterns]

1, 6, 11, 16, 21, 26, 31

14. [Time]

My birthday is on the 4/6/1959. In which month was I born?

June

15. [Measuring]

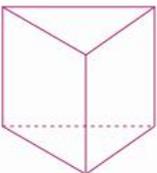
Which object is about 1 metre long?

- A) skipping rope
- B) table tennis bat
- C) golf club

C

16. [Shapes]

How many edges does a triangular prism have?



9

17. [Location]

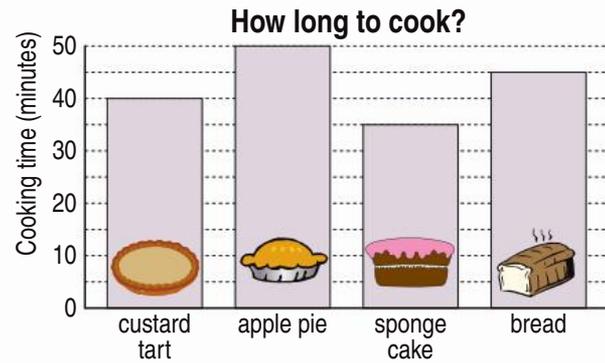
Which of the 'big things' is closest to the Big Golden Guitar?



Big Banana

18. [Statistics / Probability]

What is the cooking time for a custard tart?



40 min

19. [Problem Solving 1] \*

Des skip counted, beginning at 32, until he reached 60. Did he count by 3s, 4s or 8s?

4s

20. [Problem Solving 2] \*

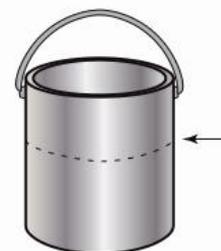
What number am I?  
I am a 2-digit number.  
I have a 7 in the tens place.  
You say me when you count by 10s.

70

21. [Problem Solving 3]

This tin holds 10 litres (L) when filled to the top. The arrow shows how much paint is in the tin. About how much paint is in the tin?

- A) 8 L
- B) 6 L
- C) 4 L



B



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

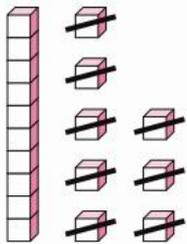
1. [Counting]

Use the balls to show counting by 4s.



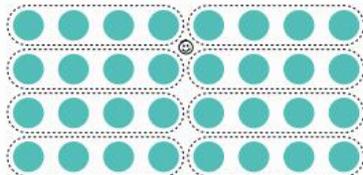
2. [Addition / Subtraction]

Complete the subtraction.



$$18 - 8 = 10$$

3. [Multiplication / Division]



32 divided into 8 groups =

$$32 \div 8 = 4$$

4. [+ Whole Numbers]

	13	8	16	9	5
+ 8	21	16	24	17	13

5. [- Whole Numbers]

$$86 - 14 = 72$$

6. [× Whole Numbers]

	8	9	5	1	6
× 5	40	45	25	5	30

7. [÷ Whole Numbers]

$$32 \div 8 = 4$$

8. [Word Problems]

Female elephants live in herds of about 10 individuals. How many female elephants would live in 6 herds?

[Write the number sentence.]

$$6 \times 10 = 60$$

9. [Fractions]

Draw lines to divide the target into thirds.

[Hint: A line has been drawn for you.]



10. [Place Value]

Write in standard form:

4 thousands + 0 hundreds + 3 tens + 2 ones =

$$4032$$

11. [Word Numbers]

Write the number 80 in words.

eighty

12. [Money]  
How much money in total?



\$ 3.20

13. [Number Patterns]

60, 70, 80, 90, 100, 110

14. [Time]

How many days in September?

30

15. [Measuring]

Which item would hold about 1 litre?

- A) jug
- B) fish tank
- C) swimming pool

A

16. [Shapes]

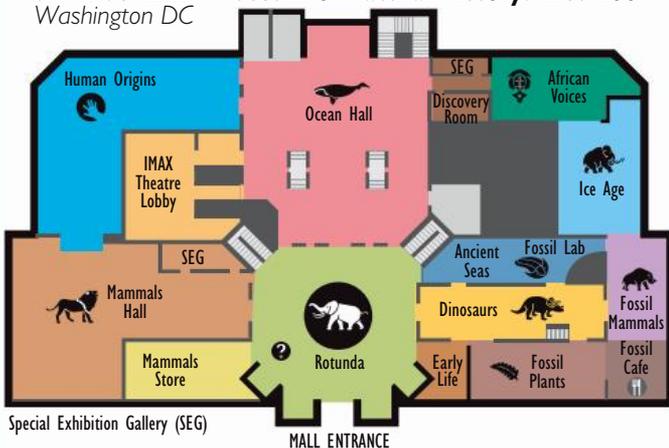
How many vertices does a rectangular prism have?

8

17. [Location]

Which section of the museum is between the Fossil Cafe and Early Life?

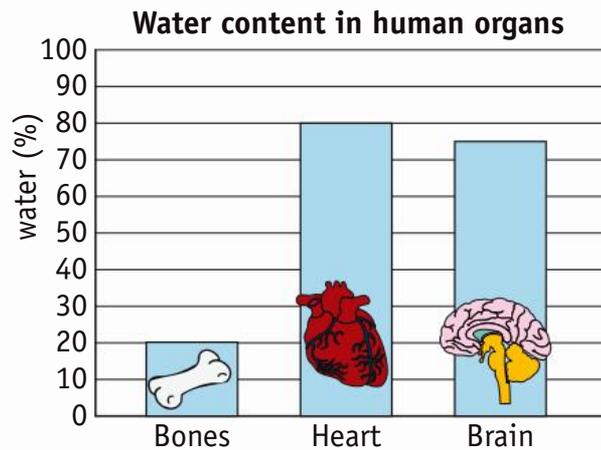
SMITHSONIAN - Museum of Natural History: first floor  
Washington DC



Fossil Plants

18. [Statistics / Probability]

Which organ of the body is 80 percent water?



heart

19. [Problem Solving 1] \*

Pepe skip counted, beginning at 20, until he reached 38. Did he count by 3s, 4s or 5s?

3s

20. [Problem Solving 2] \*

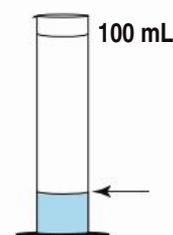
What number am I?  
I am a 2-digit number.  
I have a 3 in the units place.  
The total of my digits is 8.

53

21. [Problem Solving 3]

This cylinder holds 100 millilitres (mL). The arrow shows how much liquid is in the cylinder. About how much liquid is in the cylinder?

- A) 20 mL
- B) 30 mL
- C) 40 mL



A



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

Count by 2s.

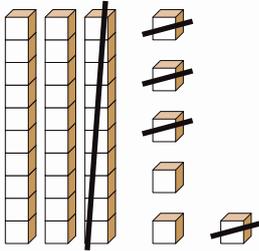
2	4	6	8	10	12
---	---	---	---	----	----

6. [× Whole Numbers]

	2	3	9	4	0
× 7	14	21	63	28	0

2. [Addition / Subtraction]

Complete the subtraction.



$$36 - 14 = 22$$

7. [÷ Whole Numbers]

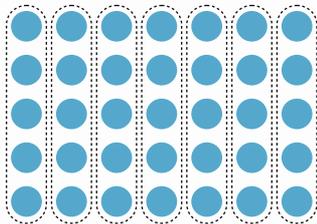
$$63 \div 7 = 9$$

8. [Word Problems]

How many legs do 7 sheep have?  
[Write the number sentence.]

$$7 \times 4 = 28$$

3. [Multiplication / Division]



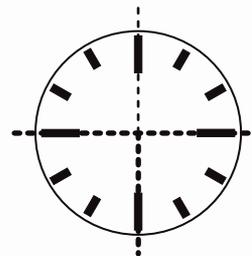
35 divided into 7 groups =

$$35 \div 7 = 5$$

9. [Fractions]

Draw lines to divide the clock into quarters.

[Hint: A line has been drawn for you.]



4. [+ Whole Numbers]

	11	7	3	14	18
+ 9	20	16	12	23	27

10. [Place Value]

Write in standard form:

3 thousands + 5 hundreds + 6 tens  
+ 4 ones =

$$3564$$

5. [- Whole Numbers]

$$38 - 27 = 11$$

11. [Word Numbers]

Write the number 60 in words.

sixty

12. [Money]  
How much money in total?



\$12.30

13. [Number Patterns]  
2, 6, 10, 14, 18, \_\_\_\_\_

22, 26

14. [Time]  
In Wellington, which season is in December, January and February?

summer

15. [Measuring]  
Which object is about 1 centimetre wide?

- A) note book  
B) biro  
C) drinking straw

B

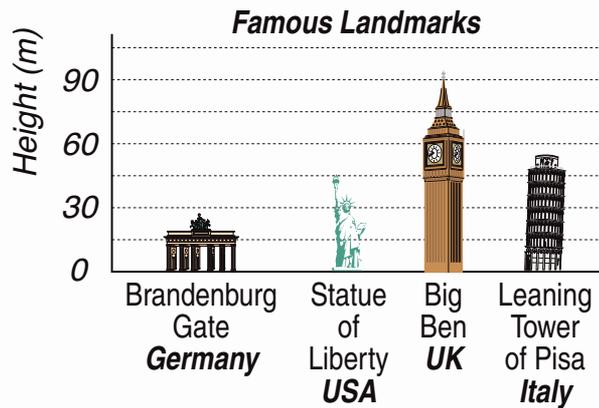
16. [Shapes]  
How many edges does a cube have?

12

17. [Location]  
As you enter Hogwarts, in which direction is the Quidditch pitch?  
A) right B) left C) ahead

A

18. [Statistics / Probability]  
Which landmark is closest to 45 metres high?



Statue of Liberty

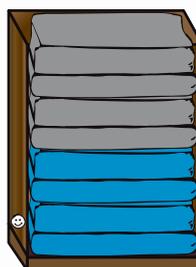
19. [Problem Solving 1] \*  
Jo skip counted, starting at 10, until she reached 42. Could she be counting by tens?

no

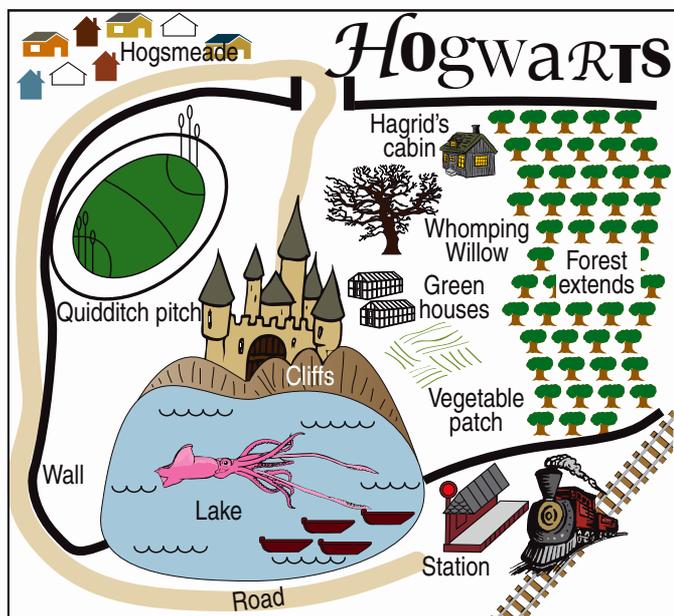
20. [Problem Solving 2] \*  
What number am I?  
I am less than 40.  
I am odd.  
You say me when you count by 5s and 7s.

35

21. [Problem Solving 3]  
There are 4 identical towels on the shelf. How many more identical towels could be placed on this shelf?



4





Name: .....

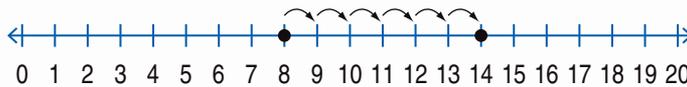
Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]  
Count forwards by 100s.

400	500	600	700	800
-----	-----	-----	-----	-----

2. [Addition / Subtraction]



$$6 + 8 = 14$$

3. [Multiplication / Division]



$$5 + 5 + 5 + 5 + 5 + 5 = 30$$

$$6 \times 5 = 30$$

4. [+ Whole Numbers]

$$17 + 41 = 58$$

5. [- Whole Numbers]

	7	8	13	11	20
- 5	2	3	8	6	15

6. [× Whole Numbers]

	6	10	7	3	9
× 4	24	40	28	12	36

7. [÷ Whole Numbers]

	35	55	25	15	45
÷ 5	7	11	5	3	9

8. [Word Problems]

A typical school term is 10 weeks. The spring holiday is five times less than this. How long is the spring holiday?

[Write the number sentence.]

$$10 \div 5 = 2 \text{ weeks}$$

9. [Fractions]

What part of the group is shaded?



2 out of 5

10. [Place Value]

Write the value of each digit.

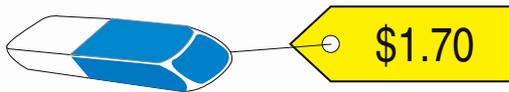
$$485 = 400 + 80 + 5$$

11. [Word Numbers]

Write the number 300 in words.

three hundred

12. [Money]  
Circle the exact money needed to buy the eraser.



13. [Number Patterns]

21, 18, 15, 12, 9, 6, 3

14. [Time]  
Use 'to' or 'past' to complete the time.

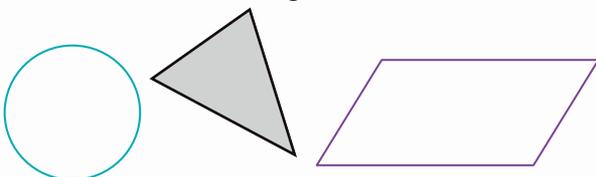


A quarter to one.

15. [Measuring]  
Which unit measures the length of a piece of string?  
A) millilitre (mL)  
B) metre (m)  
C) kilogram (kg)

**B**

16. [Shapes]  
Colour the triangle.



17. [Location]  
Who has the locker in the third column from the right and on the bottom row?

Hans	James	Fred	Seb
Harriet	Lulu	Mick	Lee

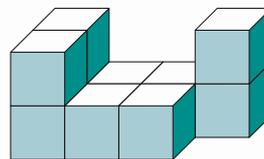
**Lulu**

18. [Statistics / Probability]  
Complete the tally table.

Months of the Year

Months with...	Tally	Number
28/29 days		<b>1</b>
30 days		4
31 days		7

19. [Problem Solving 1]  
How many cubes in this shape?

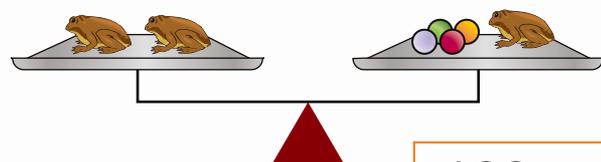


**10**

20. [Problem Solving 2] \*  
In how many ways can you make fifty cents using just 10 cent coins and 20 cent coins?

**3**

21. [Problem Solving 3] \*  
If a marble weighs 25 grams (g), how much does a frog weigh?



**100 g**



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

Count forwards by 10s.

36 46 56 66 76 86

2. [Addition / Subtraction]



$$5 + 12 = 17$$

3. [Multiplication / Division]



$$9 + 9 + 9 + 9 + 9 + 9 = 54$$

$$6 \times 9 = 54$$

4. [+ Whole Numbers]

$$36 + 23 = 59$$

5. [- Whole Numbers]

	14	21	15	18	12
- 9	5	12	6	9	3

6. [× Whole Numbers]

	10	4	9	0	7
× 7	70	28	63	0	49

7. [÷ Whole Numbers]

	27	12	15	24	6
÷ 3	9	4	5	8	2

8. [Word Problems]

To start the game Uno, seven cards are dealt out to each player. If 35 cards were dealt out altogether, how many players were there?

[Write the number sentence.]

$$35 \div 7 = 5$$

9. [Fractions]

Write a fraction for the shaded part.



2

3

10. [Place Value]

Write the value of each digit.

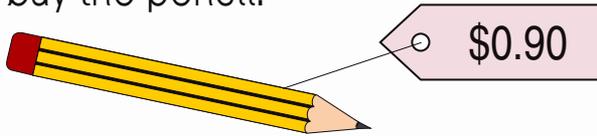
$$680 = 600 + 80 + 0$$

11. [Word Numbers]

Write the number 803 in words.

eight hundred and three

12. [Money]  
Circle the exact money needed to buy the pencil.



13. [Number Patterns]

75, 65, 55, 45, 35, **25, 15**

14. [Time]

Use 'to' or 'past' to complete the time.



Twenty-five **past** eleven.

15. [Measuring]

Which unit measures the volume of water in a bucket?

- A) litre (L)  
B) centimetre (cm)  
C) gram (g)

**A**

16. [Shapes]

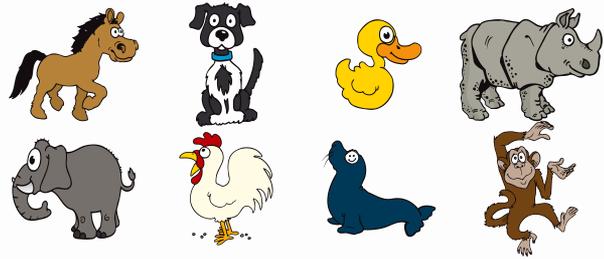
Name the shape.



**rhombus**

17. [Location]

Which animal is in the third column from the left and on the top row?



**duck**

18. [Statistics / Probability]

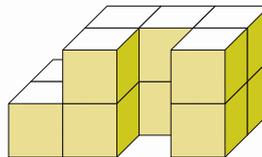
Complete the tally table.

People per square kilometre

Country	Tally	Number
Australia		<b>3</b>
New Zealand		18
Russia		9
Canada		4

19. [Problem Solving 1]

How many cubes in this shape?



**12**

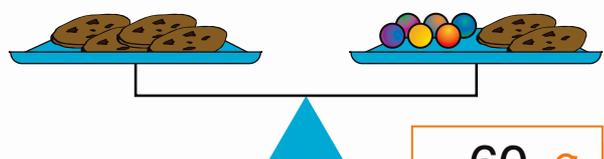
20. [Problem Solving 2] \*

In how many ways can you make one dollar using just 10 cent coins and 20 cent coins?

**6**

21. [Problem Solving 3] \*

If a marble weighs 20 grams (g), how much does a cookie weigh?



**60 g**



Name: .....

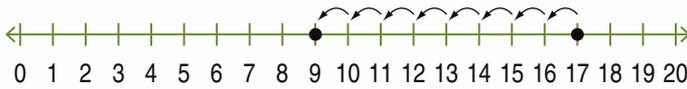
Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]  
Count backwards by 10s.

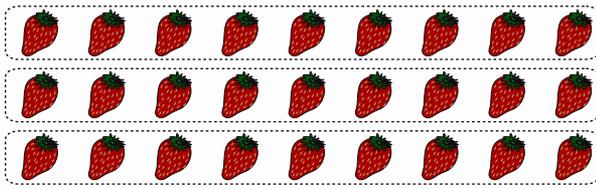
71 61 51 41 31 21

2. [Addition / Subtraction]



$$17 - 8 = 9$$

3. [Multiplication / Division]



$$27 - 9 - 9 - 9 = 0$$

$$27 \div 9 = 3$$

4. [+ Whole Numbers]

$$43 + 50 = 93$$

5. [- Whole Numbers]

	19	14	22	18	13
- 4	15	10	18	14	9

6. [× Whole Numbers]

	3	1	5	4	8
× 6	18	6	30	24	48

7. [÷ Whole Numbers]

	49	21	28	42	35
÷ 7	7	3	4	6	5

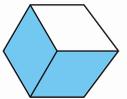
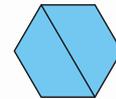
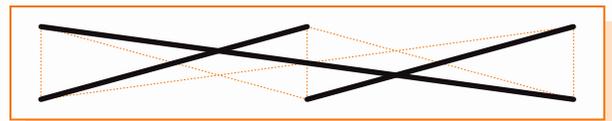
8. [Word Problems]

A total of 32 national soccer teams participate in the FIFA World Cup. The teams are equally divided into eight groups. How many teams are in each group?  
[Write the number sentence.]

$$32 \div 8 = 4$$

9. [Fractions]

Match the fractions to the shapes.

 $\frac{2}{3}$ 
 $\frac{1}{5}$ 
 $\frac{2}{2}$ 


10. [Place Value]

Write the value of each digit.

$$1852 = 1000 + 800 + 50 + 2$$

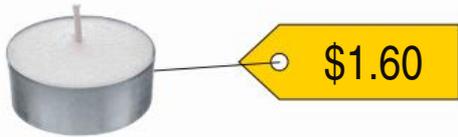
11. [Word Numbers]

Write in numerals:

two hundred and nine

209

12. [Money]  
Circle the exact money needed to buy the tea light.



13. [Number Patterns]

32, 27, 22, 17, 12, 7, 2

14. [Time]

Use 'to' or 'past' to complete the time.



Ten to four.

15. [Measuring]

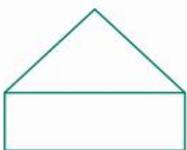
Which unit is most commonly used to measure the length of a curtain rod?

- A) kilometre (km)  
B) millimetre (mm)

**B**

16. [Shapes]

Name the two shapes used to make this figure.



rectangle and triangle

17. [Location]

Which number is in the second column and on the third row from the bottom of this keypad?



**5**

18. [Statistics / Probability]

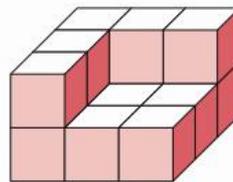
Complete the tally table.

**Days of fog - San Francisco**

Month	Tally	Number
March		11
May		5
July		10
September		<b>9</b>

19. [Problem Solving 1]

How many cubes in this shape?



**14**

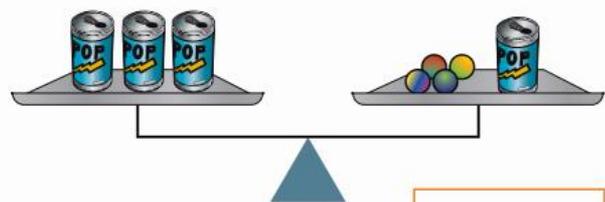
20. [Problem Solving 2] \*

In how many ways can you make two dollars using just 50 cent coins and 10 cent coins?

**5**

21. [Problem Solving 3] \*

If a marble weighs 100 grams (g), how much does a can weigh?



**200 g**



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

Count forwards by 10s.

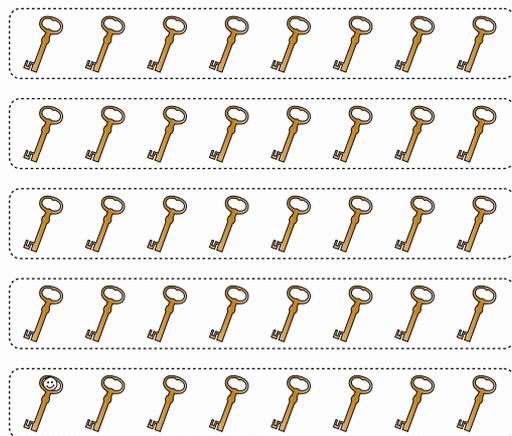
480 490 500 510 520

2. [Addition / Subtraction]



$$24 - 7 = 17$$

3. [Multiplication / Division]



$$40 - 8 - 8 - 8 - 8 - 8 = 0$$

$$40 \div 8 = 5$$

4. [+ Whole Numbers]

$$51 + 19 = 70$$

5. [- Whole Numbers]

14 9 20 25 16  
- 8 6 1 12 17 8

6. [× Whole Numbers]

9 0 6 4 7  
× 8 72 0 48 32 56

7. [÷ Whole Numbers]

24 40 28 12 32  
÷ 4 6 10 7 3 8

8. [Word Problems]

The bathroom wall is 240 cm long. It is completely covered by rows of square tiles. Each tile is 8 cm long. How many tiles fit in each row? [Write the number sentence.]

$$240 \div 8 = 30$$

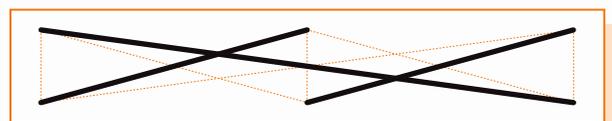
9. [Fractions]

Match the fractions to the shapes.

$$\frac{1}{4}$$

$$\frac{2}{5}$$

$$\frac{3}{3}$$



10. [Place Value]

Write the value of each digit.

$$2346 = 2000 + 300 + 40 + 6$$

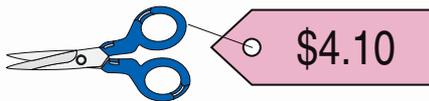
11. [Word Numbers]

Write in numerals:

three hundred and fifty

350

12. [Money]  
Circle the exact money needed to buy the scissors.



13. [Number Patterns]  
34, 30, 26, 22, 18, **14, 10**

14. [Time]  
Use 'to' or 'past' to complete the time.

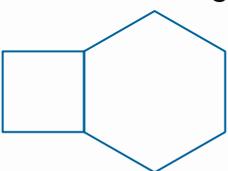


Five **past** two.

15. [Measuring]  
Which unit is most commonly used to measure the length of a road?

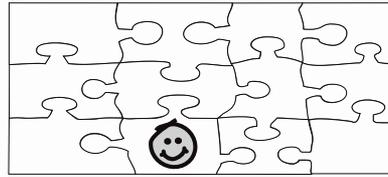
- A) kilometre (km) **A**  
B) centimetre (cm)

16. [Shapes]  
Name the two shapes used to make this figure.



**square and hexagon**

17. [Location]  
Draw a face in the jigsaw piece in the 2nd column from the left, on the bottom row.



18. [Statistics / Probability]  
Complete the tally table for states represented by Australian Prime Ministers (PMs):

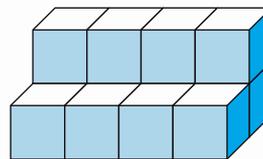
NSW - 14, VIC - 10, QLD - 4, TAS - 1  
WA - 1

Number of PMs representing the state\*

State	Tally
NSW	
VIC	
QLD	
TAS	
WA	

\*as of 2019

19. [Problem Solving 1]  
How many cubes in this shape?

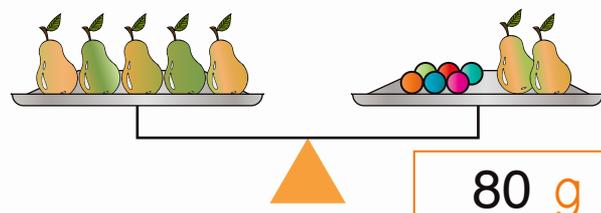


**12**

20. [Problem Solving 2] \*  
In how many ways can you make four dollars using just 50 cent coins and 10 cent coins?

**9**

21. [Problem Solving 3] \*  
If a marble weighs 40 grams (g), how much does a pear weigh?



**80 g**



Name: .....

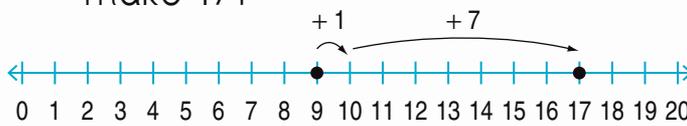
Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]  
Complete the skip counting pattern.

2 4 6 **8** 10 **12** **14**

2. [Addition / Subtraction]  
How much must be added to 9 to make 17?



$$17 - 9 = \mathbf{8}$$

3. [Multiplication / Division]  
Double this number of parallelograms by first drawing them.



$$2 \times 3 = \mathbf{6}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 35 \\ + 44 \\ \hline \mathbf{79} \end{array}$$

5. [- Whole Numbers]

$$\begin{array}{r} 47 \\ - 4 \\ \hline \mathbf{43} \end{array}$$

6. [× Whole Numbers]

	4	9	7	5	6
× 9	36	81	63	45	54

7. [÷ Whole Numbers]

	8	14	12	10	6
÷ 2	4	7	6	5	3

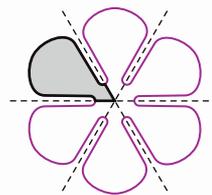
8. [Word Problems]

James scored 19 points in the Olympic basketball final and Bryant scored 17. How many points did they score between them? [Write the number sentence.]

$$\mathbf{19 + 17 = 36}$$

9. [Fractions]

Colour  $\frac{1}{6}$  of the flower.



[any sixth]

10. [Place Value]

What is the value of the underlined digit in 8214?

A) 20    B) 200    C) 2000

**B**

11. [Word Numbers]

Write in numerals:  
four hundred and nineteen

**419**

12. [Money]

You have \$2.50. Which two items can you afford to buy?



\$1.30

\$1.80

80¢

A & C

13. [Number Patterns]

24, 34, 44, 54, 64, 74

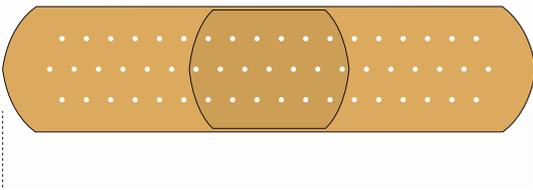
14. [Time]

Draw hands on the clock to show nine o'clock.



15. [Measuring]

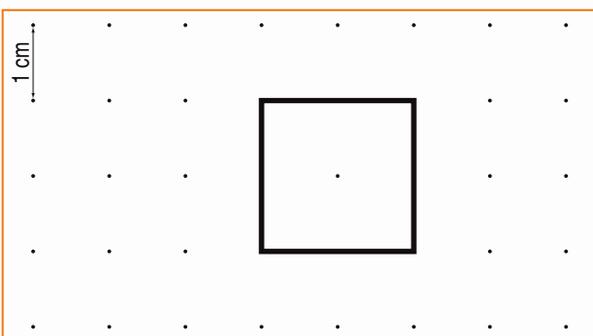
Use a ruler to measure the length of the band-aid in centimetres.



7 cm

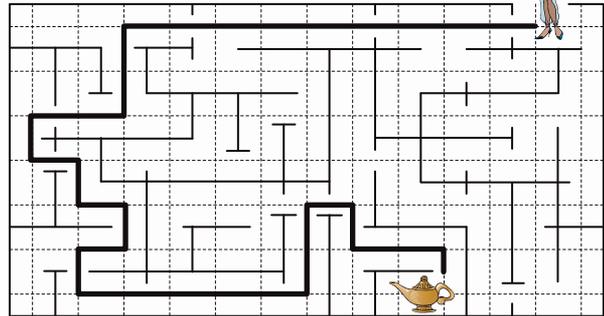
16. [Shapes]

Draw a square with side lengths of 2 cm on the grid.



17. [Location]

Draw a path through the maze so that the genie can find her lamp.



18. [Statistics / Probability]

What is the chance ...

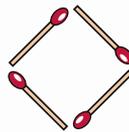
"Christmas day will be in February next year."

- A) possible
- B) impossible

B

19. [Problem Solving 1]

This is a square made out of matches. How many matches in 6 squares?



24

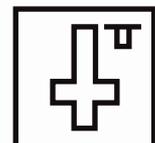
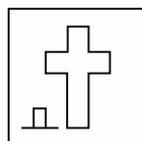
20. [Problem Solving 2] \*

Ramona bought 20 bags of beads. Each bag holds 5 beads. How many beads did she buy?

100

21. [Problem Solving 3]

Redraw this square after it is rotated half a turn.





Name: .....

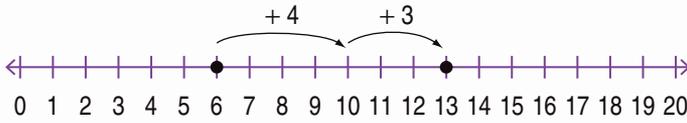
Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]  
Complete the skip counting pattern.

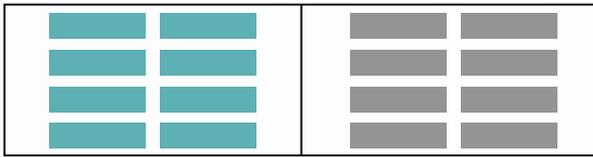
3 6 **9** **12** 15 **18** **21**

2. [Addition / Subtraction]  
How much must be added to 6 to make 13?



$$13 - 6 = \mathbf{7}$$

3. [Multiplication / Division]  
Double this number of rectangles by first drawing them.



$$\mathbf{2} \times \mathbf{8} = \mathbf{16}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 53 \\ 12 \\ + 31 \\ \hline \end{array}$$

**96**

5. [- Whole Numbers]

$$\begin{array}{r} 29 \\ - 25 \\ \hline \end{array}$$

**4**

6. [× Whole Numbers]

	3	8	2	5	4
× 5	15	40	10	25	20

7. [÷ Whole Numbers]

	9	36	45	18	72
÷ 9	1	4	5	2	8

8. [Word Problems]

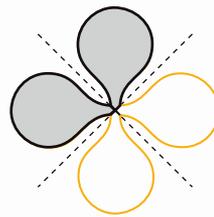
A dozen is 12 and a score is 20. How much bigger is a score than a dozen?

[Write the number sentence.]

$$\mathbf{20 - 12 = 8}$$

9. [Fractions]

Colour  $\frac{2}{4}$  of the flower.



[any 2 quarters]

10. [Place Value]

What is the value of the 9 in 1890?

A) 90    B) 900    C) 9000

**A**

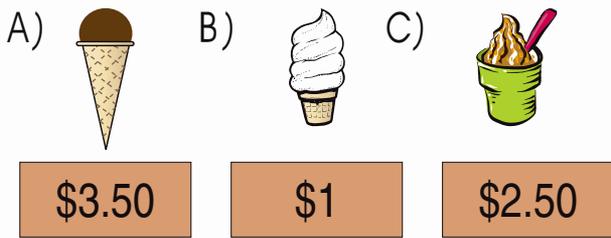
11. [Word Numbers]

Write in numerals:

seven hundred and forty-six

**746**

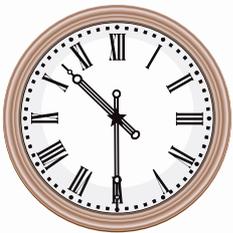
12. [Money]  
You have \$4. Which two items can you afford to buy?



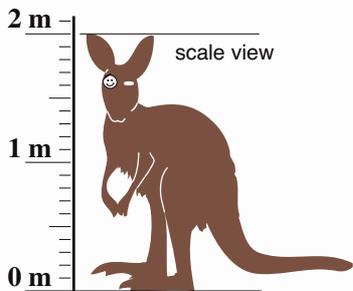
**B & C**

13. [Number Patterns]  
4, 10, 16, 22, 28, **34, 40**

14. [Time]  
Draw hands on the clock to show half past ten.



15. [Measuring]  
Use the scale. How tall is the kangaroo?



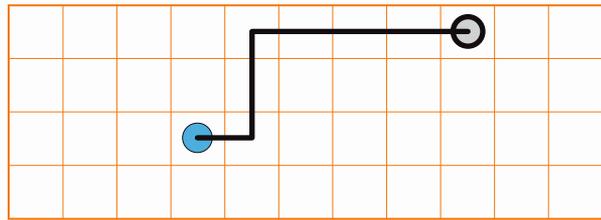
**2 m**

16. [Shapes]  
Draw a rectangle with a length of 5 cm and a width of 2 cm on the grid.



17. [Location]  
Draw the path of the counter by moving it:

1 right, 2 up, 4 right



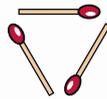
18. [Statistics / Probability]  
What is the chance ...

"A family will go to the supermarket after school."

- A) possible  
B) impossible

**A**

19. [Problem Solving 1]  
This is a triangle made out of matches. How many matches in 7 triangles?

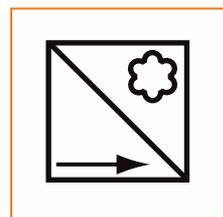
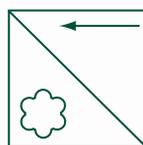


**21**

20. [Problem Solving 2] \*  
Gina printed 20 photos. She can fit 4 photos on a page in her album. How many pages will Gina fill with her photos?

**5**

21. [Problem Solving 3]  
Redraw this square after it is rotated half a turn.





Name: .....

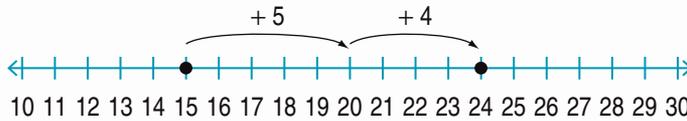
Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]  
Complete the skip counting pattern.

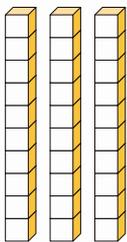
5 10 **15** **20** 25 **30** **35**

2. [Addition / Subtraction]  
How much must be added to 15 to make 24?



$$24 - 15 = \mathbf{9}$$

3. [Multiplication / Division]  
Complete the multiplication.



$$3 \text{ lots of ten} = \mathbf{30}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 620 \\ + 108 \\ \hline \mathbf{728} \end{array}$$

5. [- Whole Numbers]

$$\begin{array}{r} 39 \\ - 11 \\ \hline \mathbf{28} \end{array}$$

6. [× Whole Numbers]

	7	6	9	3	2
× 8	56	48	72	24	16

7. [+ Whole Numbers]

	15	9	6	24	12
÷ 3	5	3	2	8	4

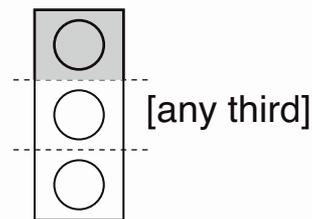
8. [Word Problems]

A decathlon has 10 events. Jim competed in 4 decathlons in 2020. In how many events did Jim compete in 2020?  
[Write the number sentence.]

$$\mathbf{4 \times 10 = 40}$$

9. [Fractions]

Colour  $\frac{1}{3}$  of the traffic light.



10. [Place Value]

Circle the thousands digit in the number:

**7**025

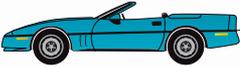
11. [Word Numbers]

Write in numerals:  
two hundred and thirty-five

**235**

12. [Money]

You have \$10.50. Which two items can you afford to buy?

- A)  \$4.95
- B)  \$5.50
- C)  \$5.95

**A & B**

13. [Number Patterns]

27, 32, 37, 42, 47, **52, 57**

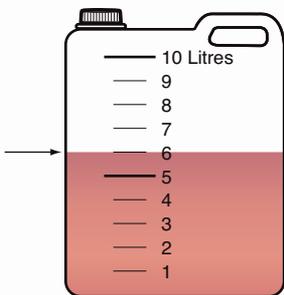
14. [Time]

Draw hands on the clock to show ten past six.



15. [Measuring]

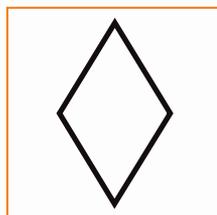
What is the volume of the petrol?



**6 L**

16. [Shapes]

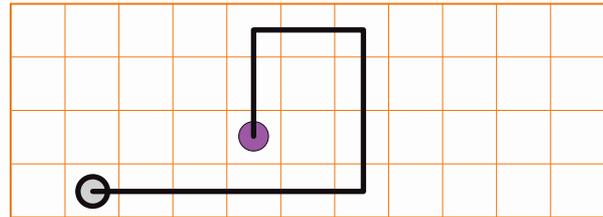
Sketch a rhombus.



17. [Location]

Draw the path of the counter by moving it:

2 up, 2 right, 3 down, 5 left



18. [Statistics / Probability]

What is the chance ...

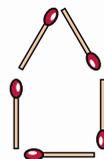
"A wild zebra will be at your house after school."

- A) likely
- B) unlikely

**B**

19. [Problem Solving 1]

This is a house made out of matches. How many matches in 5 houses?



**25**

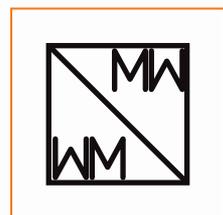
20. [Problem Solving 2] \*

Tulips are sold in bunches of 5. Rita buys 30 tulips. How many bunches does she buy?

**6**

21. [Problem Solving 3]

Redraw this square after it is rotated half a turn.





Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

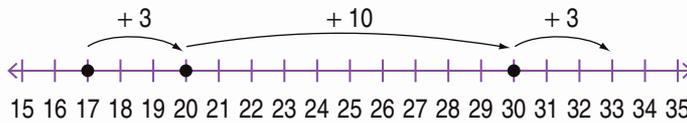
1. [Counting]

Complete the skip counting pattern.

100 **200** 300 **400** 500 **600**

2. [Addition / Subtraction]

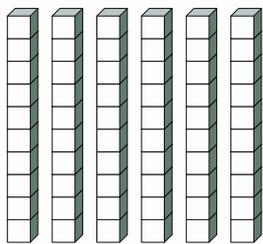
How much must be added to 17 to make 33?



$$33 - 17 = \mathbf{16}$$

3. [Multiplication / Division]

Complete the multiplication.



$$6 \times 10 = \mathbf{60}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 121 \\ + 356 \\ \hline \end{array}$$

**477**

5. [- Whole Numbers]

$$\begin{array}{r} 46 \\ - 14 \\ \hline \end{array}$$

**32**

6. [× Whole Numbers]

	8	5	4	6	9
× 3	24	15	12	18	27

7. [+ Whole Numbers]

	16	48	8	24	56
÷ 8	2	6	1	3	7

8. [Word Problems]

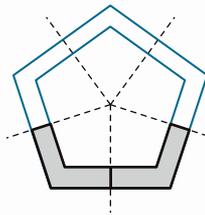
Hair grows 16 centimetres in a year. How long would hair grow in 3 months?

[Write the number sentence.]

$$16 \div 4 = 4 \text{ cm}$$

9. [Fractions]

Colour  $\frac{2}{5}$  of the pentagonal frame.



[any 2 fifths]

10. [Place Value]

Circle the hundreds digit in the number:

3**6**72

11. [Word Numbers]

Write in numerals:

eight hundred and sixty-two

**862**

12. [Money]

You have \$150. Which two items can you afford to buy?

A)  \$89.90

B)  \$77.00

C)  \$69.99

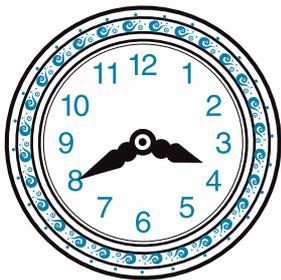
**B & C**

13. [Number Patterns]

26, 30, 34, 38, 42, **46, 50**

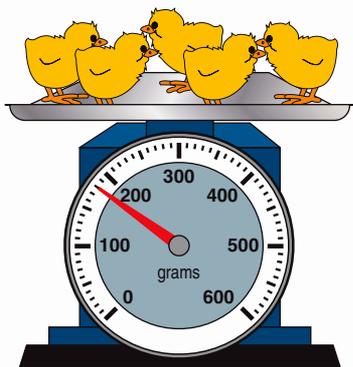
14. [Time]

Draw hands on the clock to show twenty to four.



15. [Measuring]

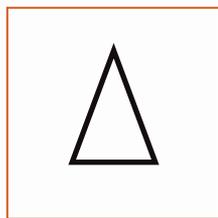
What is the weight of 5 chicks?



**180 g**

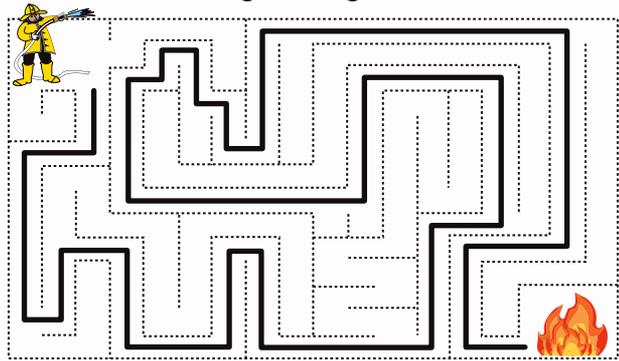
16. [Shapes]

Sketch a triangle.



17. [Location]

Draw a path through the maze so that the firefighter gets to the fire.



18. [Statistics / Probability]

What is the chance ...

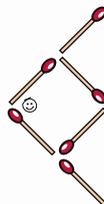
"It will rain tomorrow morning."

- A) certain
- B) uncertain

**B**

19. [Problem Solving 1]

This is a fish made out of matches. How many matches in 5 fish?



**30**

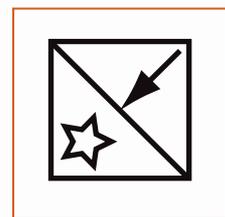
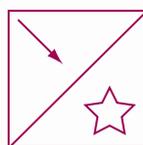
20. [Problem Solving 2] \*

Hussein bought some apples. He gave 6 to his friends and had 8 left. How many apples did Hussein buy?

**14**

21. [Problem Solving 3]

Redraw this square after it is rotated a quarter of a turn clockwise.





Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

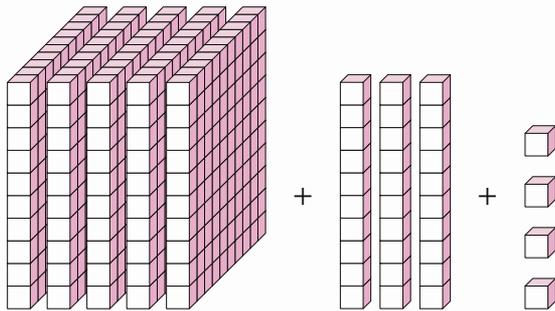
1. [Counting]

Count on by 3s from 12.

12 15 18 21 24 27

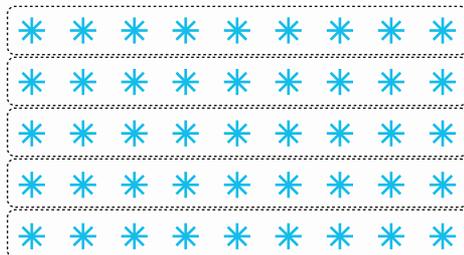
2. [Addition / Subtraction]

Complete the addition.



$$500 + 30 + 4 = 534$$

3. [Multiplication / Division]



45 divided into groups of 9 =

$$45 \div 9 = 5$$

4. [+ Whole Numbers]

$$\begin{array}{r} 176 \\ + 252 \\ \hline \end{array}$$

428

5. [- Whole Numbers]

$$\begin{array}{r} 347 \\ - 215 \\ \hline \end{array}$$

132

6. [× Whole Numbers]

$$6 \times 10 = 60$$

7. [÷ Whole Numbers]

	25	20	30	5	35
÷ 5	5	4	6	1	7

8. [Word Problems]

Squares, rectangles and parallelograms all have 4 sides. How many sides would there be if you had one of each shape? [Write the number sentence.]

$$3 \times 4 = 12$$

9. [Fractions]

Show with an arrow the fraction  $\frac{1}{3}$  on the number line.



10. [Place Value]

23 is less than (<) 62

True or false?

true

11. [Word Numbers]

Write the number 213 in words.

two hundred and thirteen

12. [Money]  
How many 10¢ coins make 50¢?

5

13. [Number Patterns]

25, 21, 17, 13, 9, 5, 1

14. [Time]

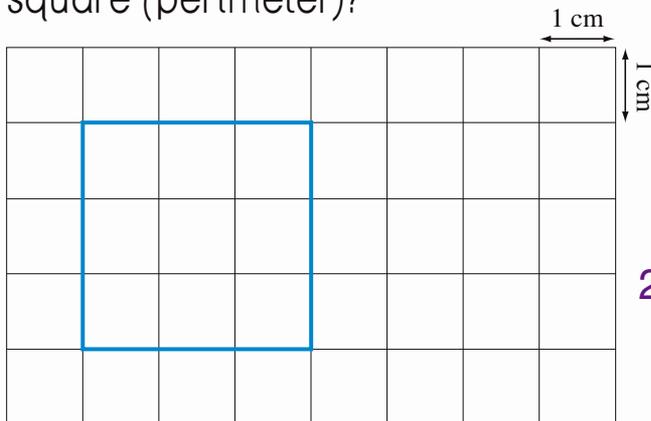
Which time is five to three?

- A) 2:45
- B) 2:55
- C) 3:55

B

15. [Measuring]

What is the distance around this square (perimeter)?



12 cm

16. [Shapes]

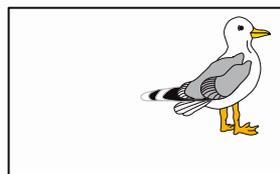
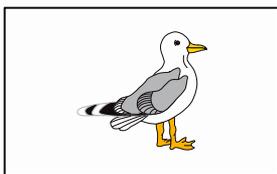
How many vertices does a square have?



4

17. [Location]

Has this bird been moved by a flip, a slide or a turn?



slide

18. [Statistics / Probability]

How many strings does a banjo have?

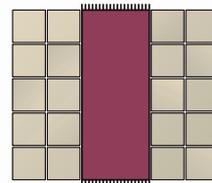
Instruments: number of strings

 banjo	
 guitar	
Key:  = 2 strings	

4

19. [Problem Solving 1] \*

A carpet is covering some of the 30 square tiles on the floor. How many tiles are covered by the carpet?



10

20. [Problem Solving 2] \*

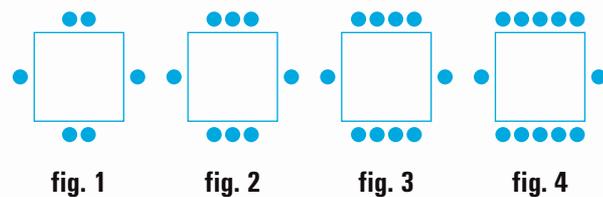
Elizabeth has only one-dollar coins. How many one-dollar coins does Elizabeth need to buy everything on her list?

pencil	\$0.50	ruler	\$1.00
sharpener	\$2.00	pen	\$3.50
eraser	\$1.50	workbook	\$2.00

11

21. [Problem Solving 3] \*

If you continue the pattern, how many dots would be in the next figure?



14



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

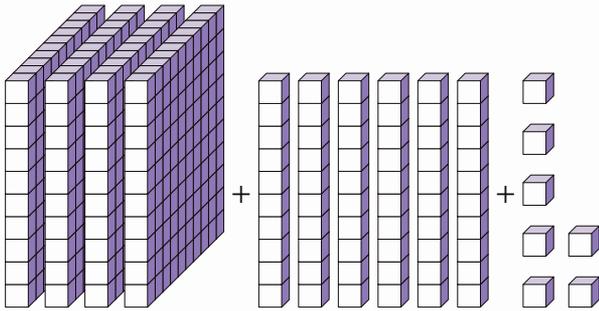
1. [Counting]

Count on by 4s from 8.

8 12 16 20 24 28

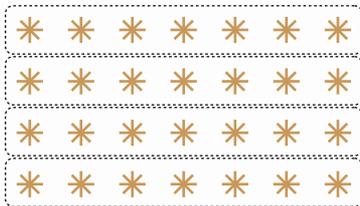
2. [Addition / Subtraction]

Complete the addition.



$$400 + 60 + 7 = 467$$

3. [Multiplication / Division]



28 divided into groups of 7 =

$$28 \div 7 = 4$$

4. [+ Whole Numbers]

$$\begin{array}{r} 119 \\ + 173 \\ \hline 292 \end{array}$$

5. [- Whole Numbers]

$$\begin{array}{r} 466 \\ - 343 \\ \hline 123 \end{array}$$

6. [× Whole Numbers]

$$7 \times 50 = 350$$

7. [+ Whole Numbers]

	60	18	30	42	24
÷ 6	10	3	5	7	4

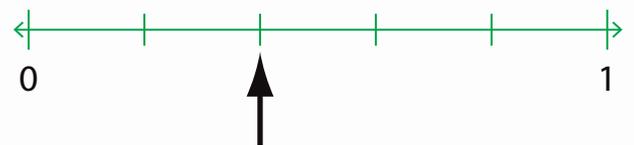
8. [Word Problems]

Male horses have 40 teeth.  
Female horses have 36 teeth.  
How many more teeth do male horses have than female horses?  
[Write the number sentence.]

$$40 - 36 = 4$$

9. [Fractions]

Show with an arrow the fraction  $\frac{2}{5}$  on the number line.



10. [Place Value]

42 is greater than ( $>$ ) 83  
True or false?

false

11. [Word Numbers]

Write the number 453 in words.

four hundred and fifty-three

12. [Money]  
How many 20¢ coins make 80¢?

4

13. [Number Patterns]

66, 56, 46, 36, 26, 16, 6

14. [Time]

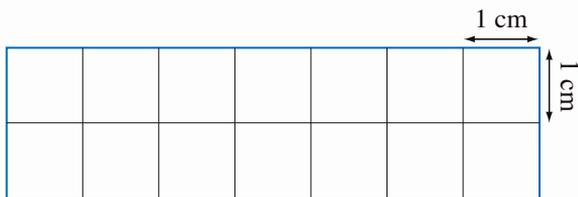
Which time is twenty to seven?

- A) 7:20
- B) 6:45
- C) 6:40

C

15. [Measuring]

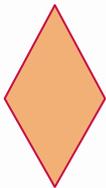
What is the distance around the rectangle (perimeter)?



18 cm

16. [Shapes]

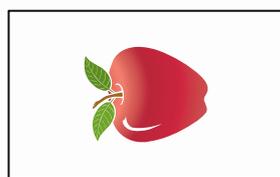
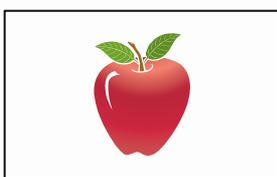
How many sides does a rhombus have?



4

17. [Location]

Has this apple been moved by a flip, a slide or a turn?



turn

18. [Statistics / Probability]

How many quoits does a player throw in a turn?

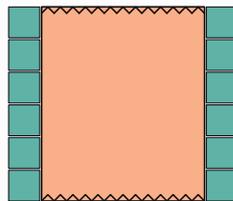
GAMES: pieces thrown in a turn

Hookey 	
Darts 	
Quoits 	
Petanque 	
Each  = 3 pieces	

3

19. [Problem Solving 1] \*

A towel is covering some of the 42 square tiles on the wall. How many tiles are covered by the towel?



30

20. [Problem Solving 2] \*

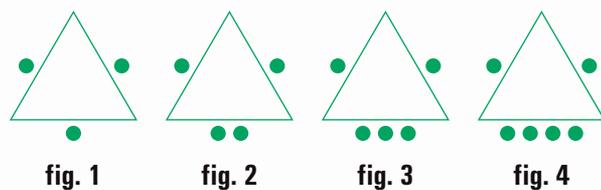
Ben has only one-dollar coins. How many one-dollar coins does Ben need to buy everything on his list?

bread	\$3.00	grapes	\$2.10
milk	\$2.00	cheese	\$4.00
butter	\$3.65	flour	\$1.00

16

21. [Problem Solving 3] \*

If you continue the pattern, how many dots would be in the next figure?



7



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

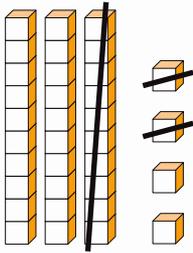
1. [Counting]

Count on by 5s from 215.

215 220 225 230 235

2. [Addition / Subtraction]

Take away 12.



$$34 - 12 = 22$$

3. [Multiplication / Division]

Complete the multiplication.

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

$$4 \times 9 = 36$$

4. [+ Whole Numbers]

$$\begin{array}{r} 333 \\ + 207 \\ \hline \end{array}$$

540

5. [- Whole Numbers]

$$\begin{array}{r} 529 \\ - 122 \\ \hline \end{array}$$

407

6. [× Whole Numbers]

$$80 \times 3 = 240$$

7. [÷ Whole Numbers]

	4	12	24	32	36
÷ 4	1	3	6	8	9

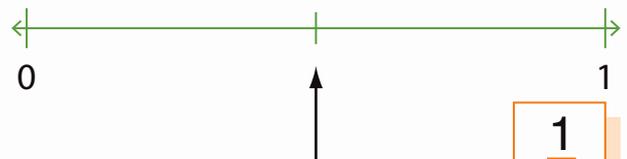
8. [Word Problems]

Each person in a quad sculling boat holds a pair of oars. There are 8 oars in the boat. How many people are there in the boat?  
[Write the number sentence.]

$$8 \div 2 = 4$$

9. [Fractions]

What fraction is shown by the arrow on the number line?



$\frac{1}{2}$

10. [Place Value]

Use greater than (>) or less than (<) to make this true.

$$236 < 263$$

11. [Word Numbers]

Write the number 619 in words.

six hundred and nineteen

12. [Money]  
How many 10¢ coins make \$1.60?

16

13. [Number Patterns]

42, 36, 30, 24, 18, 12, 6

14. [Time]

Which time is shown on the clock?

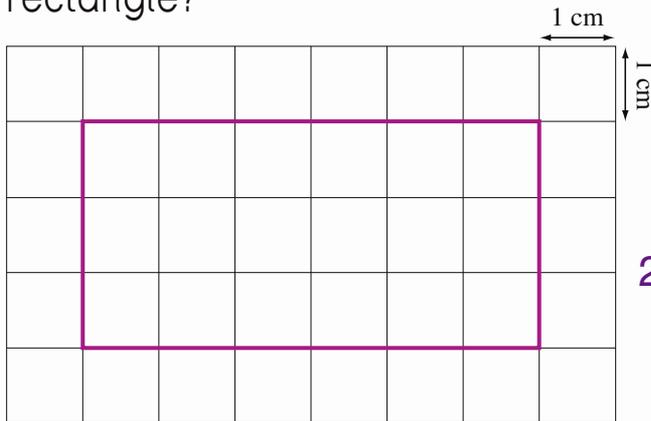
- A) 2:10
- B) 4:10
- C) 2:20



C

15. [Measuring]

What is the perimeter of this rectangle?



18 cm

16. [Shapes]

How many vertices does a triangle have?



3

17. [Location]

Has this treble clef been moved by a flip, a slide or a turn?



flip

18. [Statistics / Probability]

How many hours does it take to drive from Wellington to Mangakino?

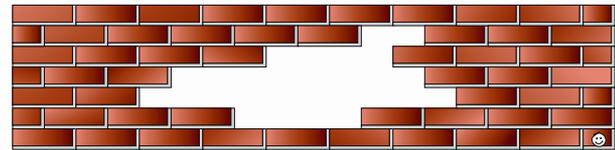
Drive Time from Wellington to ...

New Plymouth	
Dannevirke	
Mangakino	
Each  = 2 hours	Each  = 1 hour

6

19. [Problem Solving 1] \*

How many bricks have fallen from the middle of this wall?



14

20. [Problem Solving 2]

Two families of 4 people hire a cabin for 2 nights. If the total cost is \$400, what is the cost for each person for each night?

\$ 25

21. [Problem Solving 3] \*

If you continue the pattern, how many dots would be in the next figure?



fig. 1



fig. 2



fig. 3



fig. 4

13



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

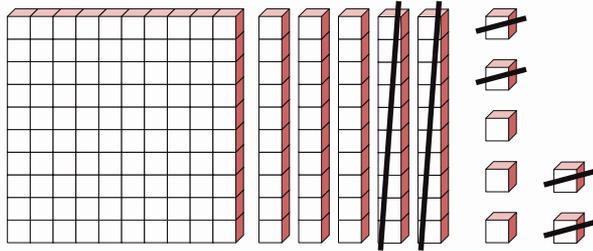
1. [Counting]

Count on by 6s from 48.

48 54 60 66 72 78

2. [Addition / Subtraction]

Complete the subtraction.



$$157 - 24 = 133$$

3. [Multiplication / Division]

Complete the multiplication.

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

$$7 \times 8 = 56$$

4. [+ Whole Numbers]

$$\begin{array}{r} 221 \\ + 584 \\ \hline \end{array}$$

$$805$$

5. [- Whole Numbers]

$$\begin{array}{r} 278 \\ - 253 \\ \hline \end{array}$$

$$25$$

6. [× Whole Numbers]

$$9 \times 60 = 540$$

7. [÷ Whole Numbers]

	28	56	14	70	63
÷ 7	4	8	2	10	9

8. [Word Problems]

Mae drove 363 kilometres from Christchurch to Dunedin. Then she drove another 210 kilometres to Invercargill. How far did Mae drive altogether?  
[Write the number sentence.]

$$363 + 210 = 573 \text{ km}$$

9. [Fractions]

What fraction is shown by the arrow on the number line?



$$\frac{3}{4}$$

10. [Place Value]

Use greater than (>) or less than (<) to make this true.

$$564 > 546$$

11. [Word Numbers]

Write the number 745 in words.

seven hundred and forty-five

12. [Money]  
How many 50¢ coins make \$3.50?

7

13. [Number Patterns]

55, 46, 37, 28, 19, 10, 1

14. [Time]

Which time is shown on the clock?

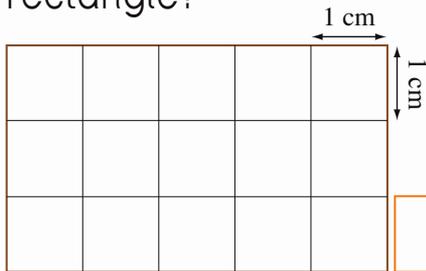
- A) 10:25
- B) 5:50
- C) 6:10



B

15. [Measuring]

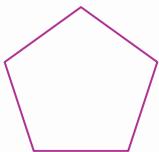
What is the perimeter of the rectangle?



16 cm

16. [Shapes]

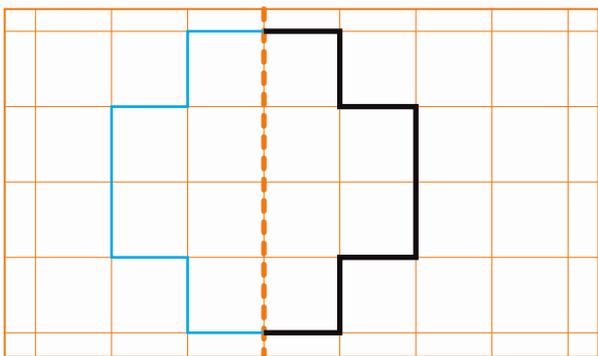
How many sides does a pentagon have?



5

17. [Location]

Draw the reflection of this shape flipped across the dotted line.



18. [Statistics / Probability]

How many movies in the Lassie series?

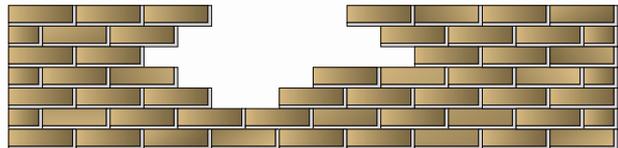
**Movies in a Series**

Harry Potter						
Lassie						
Star Wars						
Each	= 2 movies	Each	= 1 movie			

11

19. [Problem Solving 1] \*

How many bricks have fallen from the middle of this wall?



12

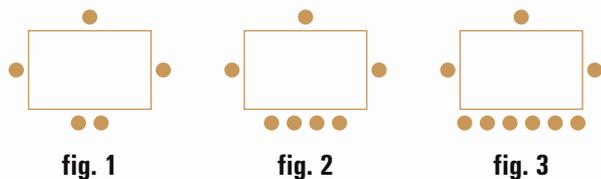
20. [Problem Solving 2] \*

Flavia breaks the strings on her tennis racquet 6 times a year. If it costs \$30 for a re-string, how much does she spend fixing her racquet each year?

\$180

21. [Problem Solving 3] \*

If you continue the pattern, how many dots would be in the next figure?



11



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

Circle the even numbers.

13    17    22    16    51    105

2. [Addition / Subtraction]

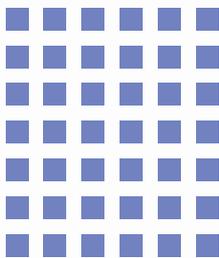
Complete the subtraction.

Trade 1 long for 10 minis

$$23 - 5 = 18$$

3. [Multiplication / Division]

Complete the multiplication.



$$7 \times 6 = 42$$

4. [+ Whole Numbers]

$$\begin{array}{r} 673 \\ + 148 \\ \hline \end{array}$$

$$821$$

5. [- Whole Numbers]

	13	22	15	19	24
- 6	7	16	9	13	18

6. [× Whole Numbers]

$$\begin{array}{r} 5 \\ \times 3 \\ \hline 15 \end{array}$$

7. [+÷ Whole Numbers]

$$\begin{array}{r} 7 \\ 5 \overline{) 35} \end{array}$$

8. [Word Problems]

A newt has a life span of 3 years. A toad has a life span of 5 times more than this. What is the life span of a toad?

[Write the number sentence.]

$$3 \times 5 = 15 \text{ years}$$

9. [Fractions]

Complete the equivalent fractions.

$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$	
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$

$$\frac{2}{3} = \frac{4}{6}$$

10. [Place Value]

Write the largest 2-digit number that contains the digits 3 and 7.

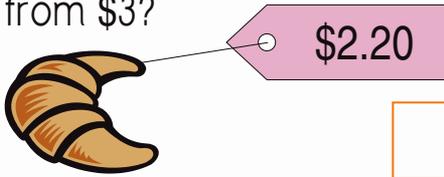
$$73$$

11. [Word Numbers]

Write in numerals:  
seven thousand

$$7000$$

12. [Money]  
How much change would you get from \$3?



80 ¢

13. [Number Patterns]

2, 4, 5, 7, 8, 10, 11

14. [Time]

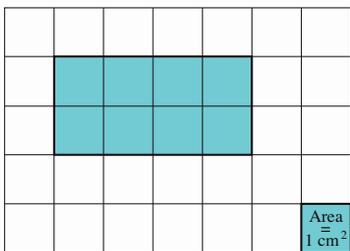
8:30 am means eight o'clock in the morning.

True or false?

false

15. [Measuring]

Find the area of the shaded rectangle.



8 cm<sup>2</sup>

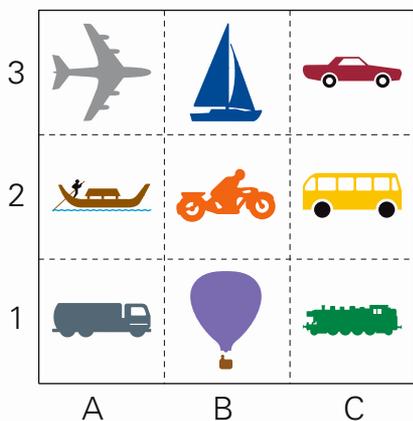
16. [Shapes]

Draw the line of symmetry.



17. [Location]

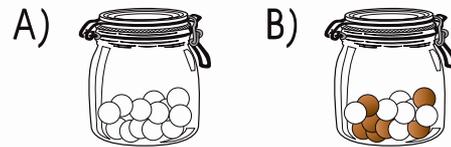
What is located at position C3?



car

18. [Statistics / Probability]

Two jars contain chocolates. A chocolate is chosen from each jar without looking. From which jar does a dark chocolate have no chance of being chosen?



A

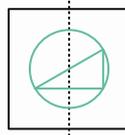
19. [Problem Solving 1] \*

The sum of two numbers is 15 and their difference is 3. What are the two numbers?

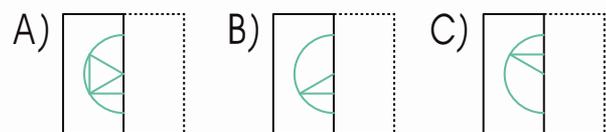
6 and 9

20. [Problem Solving 2]

A transparent square sheet has a design on it. The sheet is folded in half along the dots.



Which image will appear after folding?



A

21. [Problem Solving 3]

Fill in the missing digits.

$$\begin{array}{r} 6 \quad 5 \\ + \quad 3 \quad 1 \\ \hline 9 \quad 6 \end{array}$$



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

Circle the odd numbers.

18 1 16 27 13 4 100

2. [Addition / Subtraction]

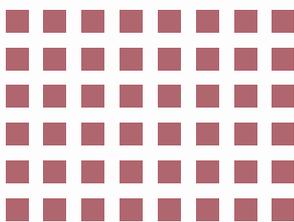
Complete the subtraction.

Trade 1 long for 10 minis

$$24 - 7 = 17$$

3. [Multiplication / Division]

Complete the multiplication.



$$6 \times 8 = 48$$

4. [+ Whole Numbers]

$$\begin{array}{r} 327 \\ + 586 \\ \hline \end{array}$$

$$913$$

5. [- Whole Numbers]

	18	23	12	27	21
- 9	9	14	3	18	12

6. [× Whole Numbers]

$$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array}$$

7. [÷ Whole Numbers]

$$\begin{array}{r} 5 \\ 6 \overline{) 30} \end{array}$$

8. [Word Problems]

A 400 m swim is 8 laps of the pool. A 100 m swim is 4 times less than this. How many laps of the pool is a 100 m swim?

[Write the number sentence.]

$$8 \div 4 = 2$$

9. [Fractions]

Complete the equivalent fractions.

$\frac{1}{8}$							
$\frac{1}{4}$							

$$\frac{6}{8} = \frac{3}{4}$$

10. [Place Value]

Write the smallest 3-digit number that contains the digits 5, 6 and 2.

$$256$$

11. [Word Numbers]

Write in numerals:  
two thousand, four hundred

$$2400$$

12. [Money]  
How much change would you get from \$10?



\$5.60

\$ 4.40

13. [Number Patterns]

3, 4, 7, 8, 11, 12, 15

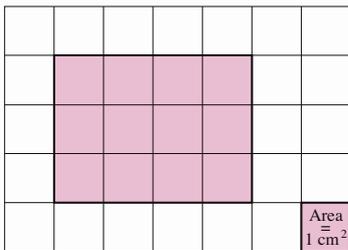
14. [Time]

Write the time 'a quarter past twelve in the afternoon' in digital form.

12:15 pm

15. [Measuring]

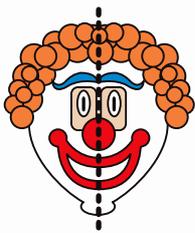
Find the area of the shaded shape.



12 cm<sup>2</sup>

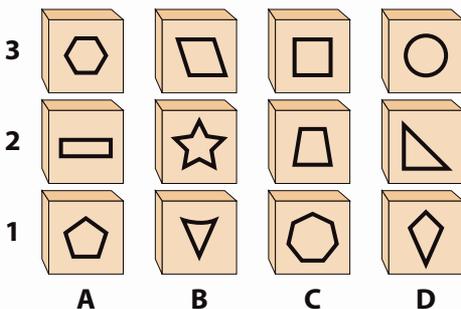
16. [Shapes]

Draw the line of symmetry.



17. [Location]

Which shape is located at position D3?

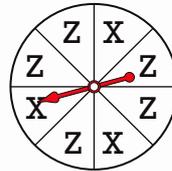


circle

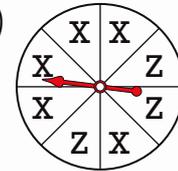
18. [Statistics / Probability]

Each wheel is spun once. On which wheel does the letter 'X' have a greater chance of being spun?

A)



B)



B

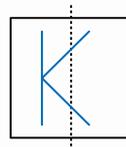
19. [Problem Solving 1] \*

The sum of two numbers is 17 and their difference is 5. What are the two numbers?

6 and 11

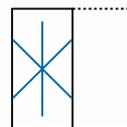
20. [Problem Solving 2]

A transparent square sheet has a design inside. The sheet is folded in half along the dots.

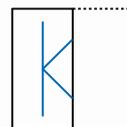


Which image will appear after folding?

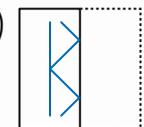
A)



B)



C)



C

21. [Problem Solving 3]

Fill in the missing digits.

$$\begin{array}{r} \boxed{6} \ 9 \\ - \ 5 \ 6 \\ \hline 1 \ \boxed{3} \end{array}$$



Name: .....

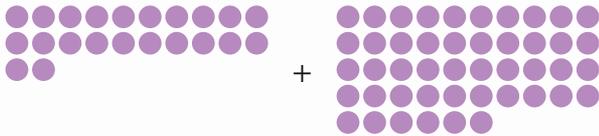
Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]  
Which of these numbers is odd?  
2, 36, 27, 94, 38, 70

27

2. [Addition / Subtraction]  
Complete the number sentence.



$$22 + 46 = 68$$

3. [Multiplication / Division]  
Circle to complete the division.



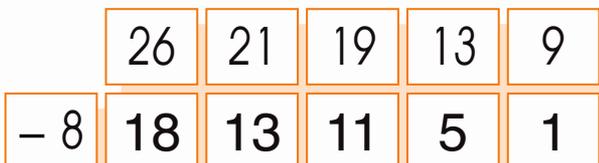
$$56 \div 7 = 8$$

4. [+ Whole Numbers]

$$\begin{array}{r} 4736 \\ + 2815 \\ \hline \end{array}$$

7551

5. [- Whole Numbers]



6. [× Whole Numbers]

$$\begin{array}{r} 7 \\ \times 6 \\ \hline 42 \end{array}$$

7. [+ Whole Numbers]

$$\begin{array}{r} 7 \\ 8 \overline{) 56} \end{array}$$

8. [Word Problems]

The average age of an Olympic athlete is 26 years. The average age of an astronaut is 34 years. What is the difference between these ages?

[Write the number sentence.]

$$34 - 26 = 8 \text{ years}$$

9. [Fractions]

Complete the equivalent fractions.

$\frac{1}{10}$									
$\frac{1}{5}$									

$$\frac{8}{10} = \frac{4}{5}$$

10. [Place Value]

Using the digits 3, 7 and 8 write a number between 700 and 750.

738

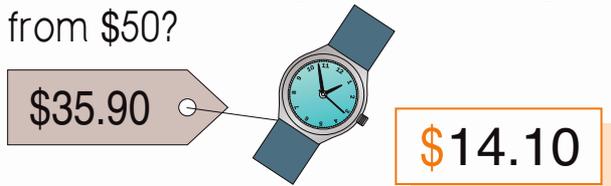
11. [Word Numbers]

Write in numerals:  
three thousand and forty-five

3045

12. [Money]

How much change would you get from \$50?



13. [Number Patterns]

3, 6, 8, 11, 13, **16, 18**

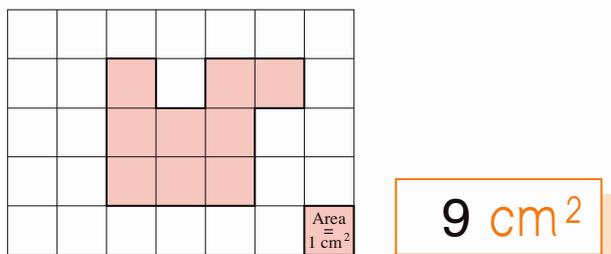
14. [Time]

Write the time 'twenty-five minutes past one in the morning' in digital form.

**1 : 25 am**

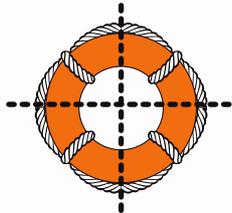
15. [Measuring]

Find the area of the shaded shape.



16. [Shapes]

Draw the lines of symmetry.

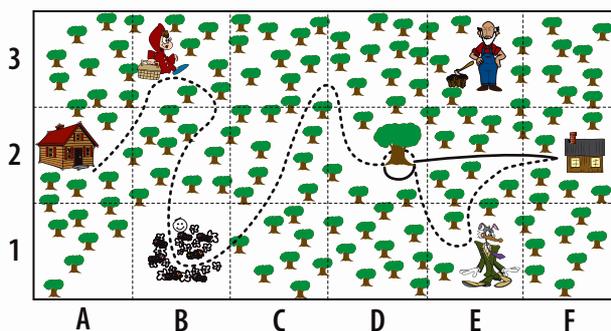


17. [Location]

Who is located at position E1?

- A) Little Red Riding Hood
- B) The wolf
- C) The woodcutter

**B**



18. [Statistics / Probability]

List the two possible outcomes when you toss this coin.



**heads, tails**

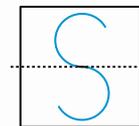
19. [Problem Solving 1] \*

Two numbers add to 21. The larger number is 2 times the smaller number. What are the two numbers?

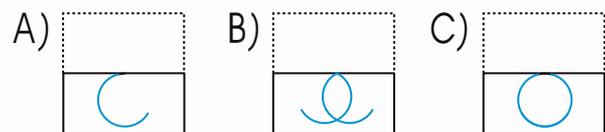
**7 and 14**

20. [Problem Solving 2]

A transparent square sheet has a design inside. The sheet is folded in half along the dots.



Which image will appear after folding?



**C**

21. [Problem Solving 3]

Fill in the missing digits.

$$\begin{array}{r} 5 \quad \mathbf{8} \\ - 2 \quad 4 \\ \hline \mathbf{3} \quad 4 \end{array}$$



Name: .....

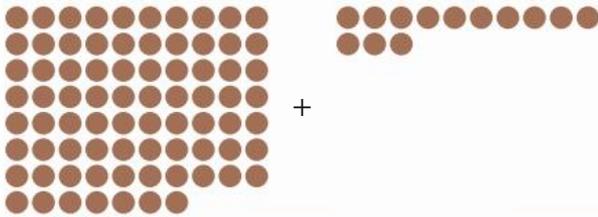
Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]  
Which of these numbers is even?  
13, 51, 83, 67, 92, 19

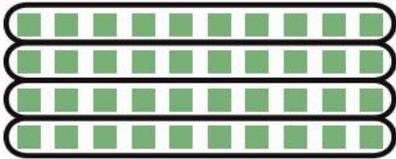
92

2. [Addition / Subtraction]  
Complete the number sentence.



$$77 + 13 = 90$$

3. [Multiplication / Division]  
Circle to complete the division.



$$40 \div 4 = 10$$

4. [+ Whole Numbers]

$$\begin{array}{r} 8497 \\ + 809 \\ \hline \end{array}$$

9306

5. [- Whole Numbers]

	23	12	15	20	13
- 7	16	5	8	13	6

6. [× Whole Numbers]

$$\begin{array}{r} 8 \\ \times 5 \\ \hline 40 \end{array}$$

7. [+ Whole Numbers]

$$\begin{array}{r} 12 \\ 4 \overline{) 48} \end{array}$$

8. [Word Problems]

The Eureka Tower (Melbourne) has 91 floors. The Sears Tower (Chicago) has 19 more floors than the Eureka Tower. How many floors in the Sears Tower?  
[Write the number sentence.]

$$91 + 19 = 110$$

9. [Fractions]

Complete the equivalent fractions.

$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$

$$\frac{3}{6} = \frac{2}{4}$$

10. [Place Value]

Using the digits 2, 4 and 6 write a number between 410 and 430.

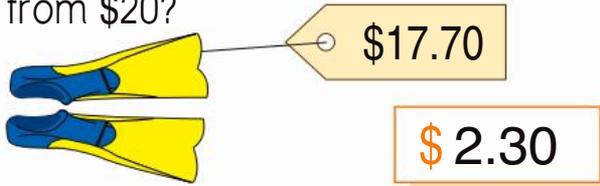
426

11. [Word Numbers]

Write in numerals:  
six thousand and two

6002

12. [Money]  
How much change would you get from \$20?

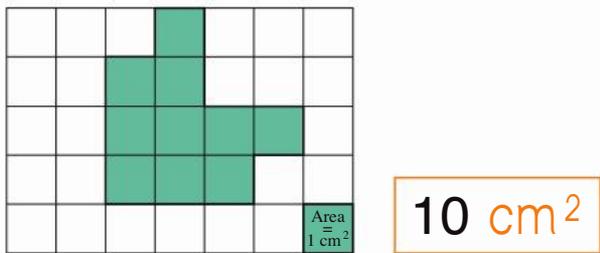


13. [Number Patterns]  
1, 2, 6, 7, 11, **12, 16**

14. [Time]  
Write the time 'a quarter to eight in the morning' in digital form.

**7 : 45 am**

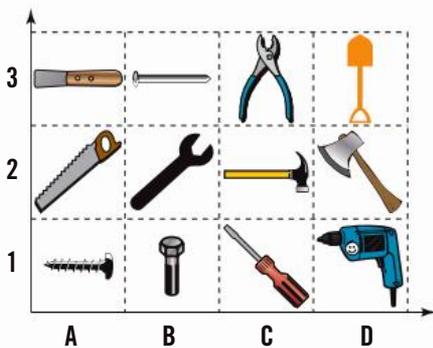
15. [Measuring]  
Find the area of the shaded shape.



16. [Shapes]  
Draw the lines of symmetry.

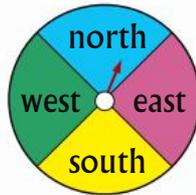


17. [Location]  
Which tool is located at position A2?



**saw**

18. [Statistics / Probability]  
List the four possible outcomes when you spin this spinner.

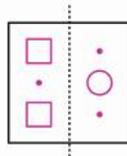


**north, east, south, west**

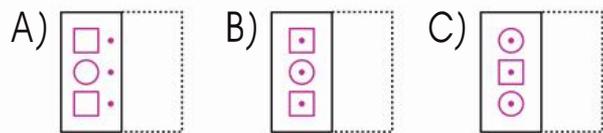
19. [Problem Solving 1] \*  
Two numbers add to 27. The larger number is 2 times the smaller number. What are the two numbers?

**9 and 18**

20. [Problem Solving 2]  
A transparent square sheet has a design inside. The sheet is folded in half along the dots.



Which image will appear after folding?



**B**

21. [Problem Solving 3]  
Fill in the missing digits.

$$\begin{array}{r} \boxed{6} \boxed{2} \\ + 16 \\ \hline 78 \end{array}$$



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

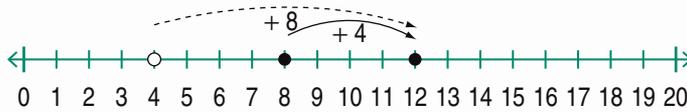
Complete the number line.



6. [× Whole Numbers]

$$\begin{array}{r} 8 \\ \times 9 \\ \hline 72 \end{array}$$

2. [Addition / Subtraction]



$$4 + 8 = 8 + 4$$

7. [÷ Whole Numbers]

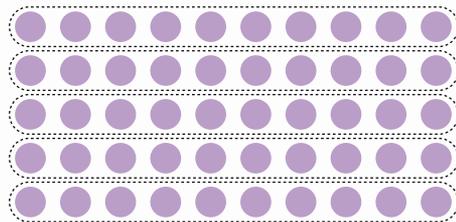
$$18 \div 2 = 9$$

8. [Word Problems]

A lionfish has 13 spines on its back, 2 near the middle of its underside, and 3 on its underside near the tail. How many spines does a lionfish have in total? [Write the number sentence.]

$$13 + 2 + 3 = 18$$

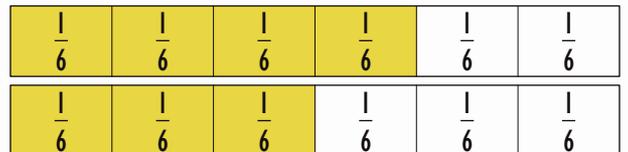
3. [Multiplication / Division]



$$5 \times 10 = 50 \quad 50 \div 5 = 10$$

9. [Fractions]

Use  $<$ ,  $=$  or  $>$  to make this true.



$$\frac{4}{6} > \frac{3}{6}$$

4. [+ Whole Numbers]

	10	15	19	8	13
+ 7	17	22	26	15	20

10. [Place Value]

Place in order from smallest to largest:

96, 66, 99, 69

$$66, 69, 96, 99$$

5. [- Whole Numbers]

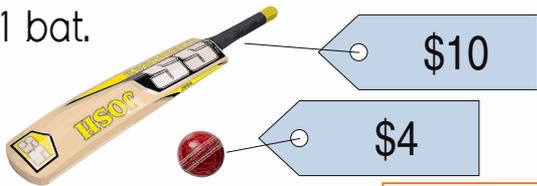
$$\begin{array}{r} 242 \\ - 16 \\ \hline 226 \end{array}$$

11. [Word Numbers]

Write the number 6000 in words.

six thousand

12. [Money] \*  
Calculate the cost of 2 balls and 1 bat.



\$ 18

13. [Number Patterns]

11, 10, 8, 7, 5, 4, 2

14. [Time]

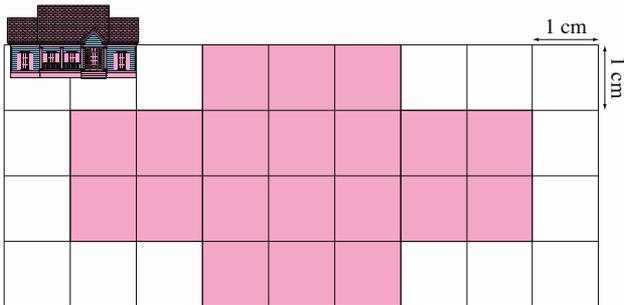
Write the time 4:15 in words.

four fifteen

OR a quarter past four

15. [Measuring]

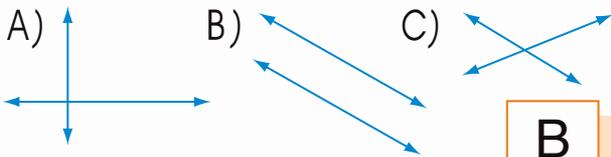
The area of the doll's house is shaded. Find the area.



20 cm<sup>2</sup>

16. [Shapes]

Which lines are parallel?

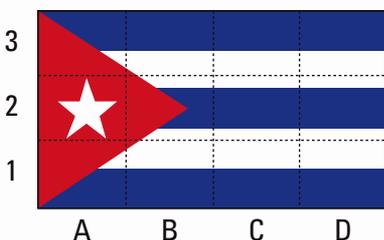


B

17. [Location]

In which position is the star on the flag of Cuba?

A) B2    B) A2    C) C2    D) D3



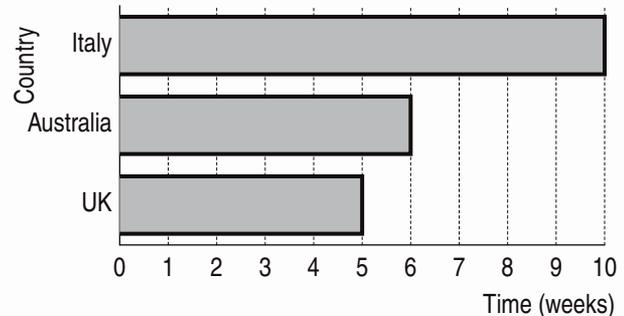
B

18. [Statistics / Probability]

Use the table to fill in the graph.

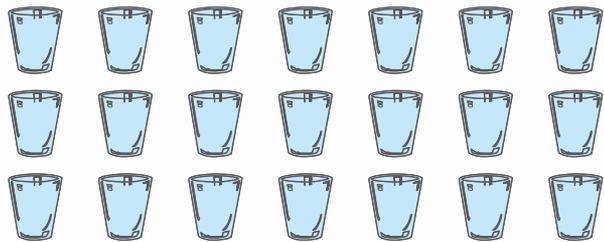
Length of School Summer Holidays

Country	School holiday time
Italy	10 weeks
Australia	6 weeks
United Kingdom (UK)	5 weeks



19. [Problem Solving 1]

John counted the glasses by 7s.



How many glasses were left over when Julie counted them by 6s?

3

20. [Problem Solving 2] \*

A male Bengal tiger measures 185 cm in length, not including its tail and 305 cm including its tail. How long is the tail?

120 cm

21. [Problem Solving 3] \*

If  $20 \times 5 = 100$ , then

$22 \times 5 = 110$



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

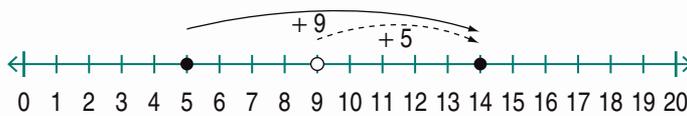
Complete the number line.



6. [× Whole Numbers]

$$\begin{array}{r} 6 \\ \times 6 \\ \hline 36 \end{array}$$

2. [Addition / Subtraction]



$$9 + 5 = 5 + 9$$

7. [÷ Whole Numbers]

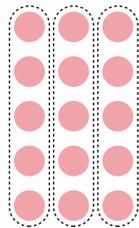
$$50 \div 10 = 5$$

8. [Word Problems]

A Snow Goose is 76 centimetres high. An Emperor Penguin is 114 centimetres high. What is the difference between these heights? [Write the number sentence.]

$$114 - 76 = 38 \text{ cm}$$

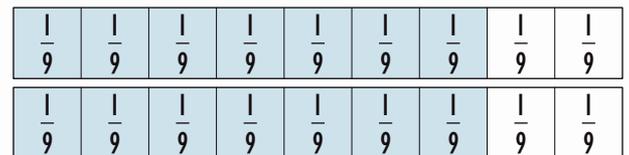
3. [Multiplication / Division]



$$5 \times 3 = 15 \quad 15 \div 3 = 5$$

9. [Fractions]

Use <, = or > to make this true.



$$\frac{7}{9} = \frac{7}{9}$$

4. [+ Whole Numbers]

	7	19	14	10	16
+ 6	13	25	20	16	22

10. [Place Value]

Place in order from largest to smallest:

105, 501, 15, 55, 115

$$501, 115, 105, 55, 15$$

5. [- Whole Numbers]

$$\begin{array}{r} 341 \\ - 135 \\ \hline 206 \end{array}$$

11. [Word Numbers]

Write the number 4007 in words.

four thousand and seven

12. [Money] \*

Calculate the cost of 1 pair of shoes and 2 pairs of socks.



13. [Number Patterns]

18, 15, 13, 10, 8, 5, 3

14. [Time]

Write the time 9:45 in words.

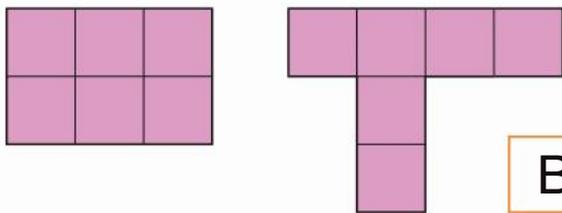
nine forty-five

15. [Measuring]

OR a quarter to ten

The shapes below have the same:

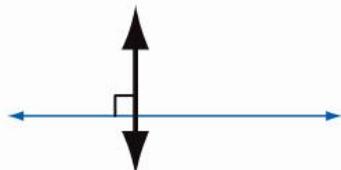
- A) perimeter
- B) area
- C) perimeter and area



B

16. [Shapes]

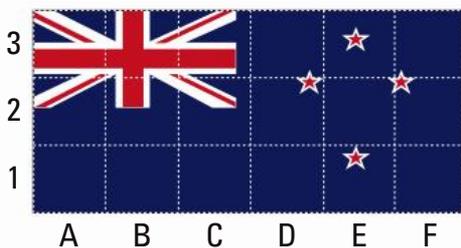
Draw a line perpendicular to this horizontal line.



17. [Location]

Which of these locations has a star in it?

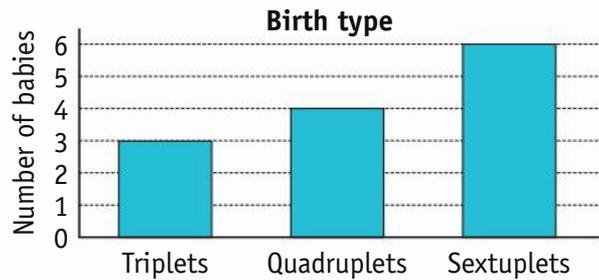
- A) C1    B) E1    C) B3    D) A2



B

18. [Statistics / Probability]

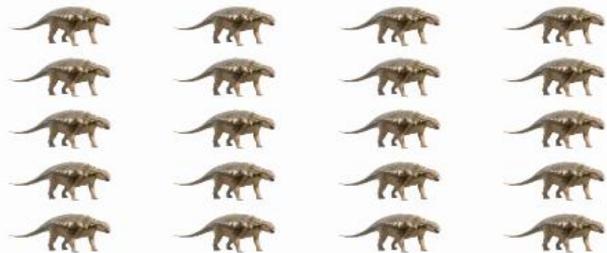
Use the graph to complete the table.



Birth type	Number of babies
Triplets	<b>3</b>
Quadruplets	<b>4</b>
Sextuplets	<b>6</b>

19. [Problem Solving 1]

Claude counted the dinosaurs by 4s.



How many dinosaurs were left over when Joanna counted them by 3s?

2

20. [Problem Solving 2] \*

The Anaconda is 6 m long and the Reticulated Python is 10 m long. How many centimetres longer is the Python than the Anaconda?

400 cm

21. [Problem Solving 3] \*

If  $30 \times 3 = 90$ , then

$33 \times 3 =$  99



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

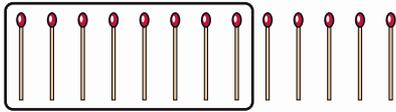
1. [Counting]  
Complete the number line.



6. [× Whole Numbers]

$$\begin{array}{r} 7 \\ \times 5 \\ \hline 35 \end{array}$$

2. [Addition / Subtraction]

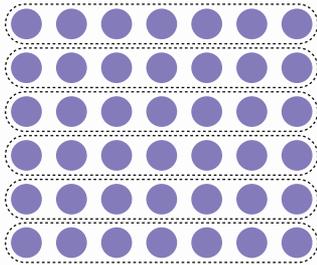


$$8 + 5 = 13 \quad 13 - 8 = 5$$

7. [+ Whole Numbers]

$$24 \div 3 = 8$$

3. [Multiplication / Division]



$$6 \times 7 = 42 \quad 42 \div 6 = 7$$

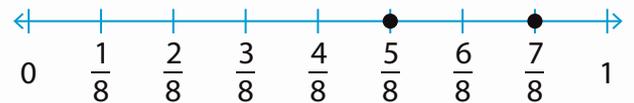
8. [Word Problems]

A yawn lasts 6 seconds. Walter yawned 5 times. For how long altogether did Walter yawn?  
[Write the number sentence.]

$$5 \times 6 = 30 \text{ seconds}$$

9. [Fractions]

Mark  $\frac{5}{8}$  and  $\frac{7}{8}$  on the diagram.



Use  $<$ ,  $=$  or  $>$  to make this true.

$$\frac{5}{8} < \frac{7}{8}$$

4. [+ Whole Numbers]

	14	19	7	18	13
+ 8	22	27	15	26	21

10. [Place Value]

Place in order from smallest to largest:

205, 81, 212, 515, 152

$$81, 152, 205, 212, 515$$

5. [- Whole Numbers]

$$\begin{array}{r} 617 \\ - 134 \\ \hline \end{array}$$

$$483$$

11. [Word Numbers]

Write the number 6030 in words.

six thousand and thirty

12. [Money] \*

What is the total value of:  
two 10-cent coins,  
one 20-cent coin and  
one 50-cent coin?

90 ¢

13. [Number Patterns]

12, 10, 9, 7, 6,

4, 3

14. [Time]

Write the time in  
words.



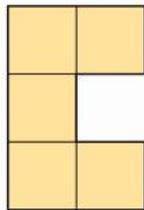
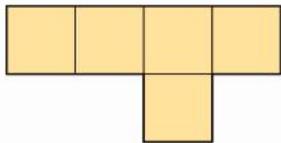
five to five

15. [Measuring]

OR four fifty-five

The shapes below have the same:

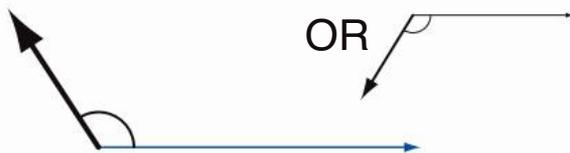
- A) perimeter
- B) area
- C) perimeter and area



C

16. [Shapes]

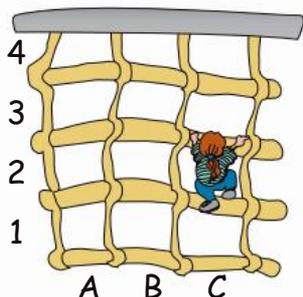
Draw an obtuse angle using this  
line.



17. [Location]

In which position is the climber?

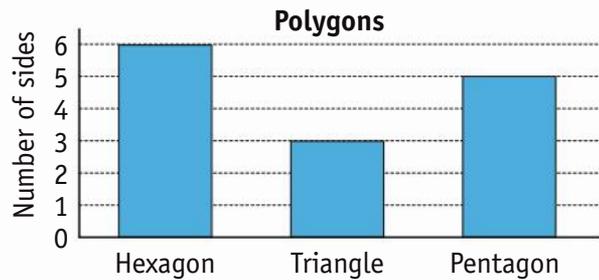
- A) A2
- B) C4
- C) B3
- D) C2



D

18. [Statistics / Probability]

Use the graph to complete the  
table.



Polygons	Number of sides
Hexagon	6
Triangle	3
Pentagon	5

19. [Problem Solving 1]

Cat counted the sunglasses by 5s.



How many sunglasses were left  
over when David counted them  
by 2s?

1

20. [Problem Solving 2] \*

Gillian rides her bike 4 km each  
day for 2 weeks. How many  
kilometres does she travel in  
total?

56 km

21. [Problem Solving 3] \*

If  $50 \times 4 = 200$ , then

$52 \times 4 = 208$



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

1. [Counting]

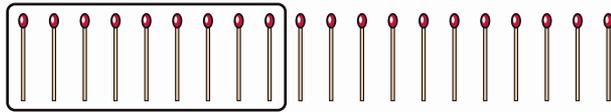
Complete the number line.



6. [× Whole Numbers]

$$\begin{array}{r} 9 \\ \times 4 \\ \hline 36 \end{array}$$

2. [Addition / Subtraction]



$$9 + 11 = 20 \quad 20 - 9 = 11$$

7. [+ Whole Numbers]

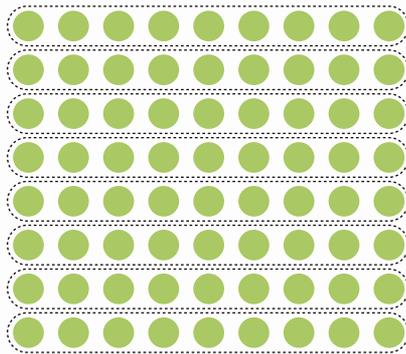
$$35 \div 5 = 7$$

8. [Word Problems]

There are 12 contestants entering the live shows of the music competition. They are equally divided into 4 teams. How many contestants does each team have? [Write the number sentence.]

$$12 \div 4 = 3$$

3. [Multiplication / Division]



$$8 \times 9 = 72 \quad 72 \div 8 = 9$$

9. [Fractions]

Mark  $\frac{4}{5}$  and  $\frac{2}{5}$  on the diagram.



Use  $<$ ,  $=$  or  $>$  to make this true.

$$\frac{4}{5} > \frac{2}{5}$$

4. [+ Whole Numbers]

	14	9	11	17	15
+ 9	23	18	20	26	24

10. [Place Value]

Place in order from largest to smallest:

843, 348, 834, 438, 384

$$843, 834, 438, 384, 348$$

5. [- Whole Numbers]

$$\begin{array}{r} 632 \\ - 117 \\ \hline 515 \end{array}$$

11. [Word Numbers]

Write the number 7052 in words.

seven thousand and fifty-two

12. [Money] \*

What is the total value of:  
two 1-dollar coins,  
three 50-cent coins and  
two 20-cent coins?

\$ 3.90

13. [Number Patterns]

15, 14, 10, 9, 5,

4, 0

14. [Time]

Write the time in words.

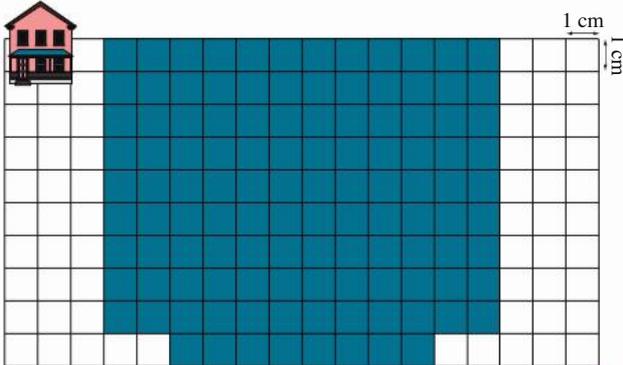


twenty past seven

15. [Measuring]

OR seven twenty

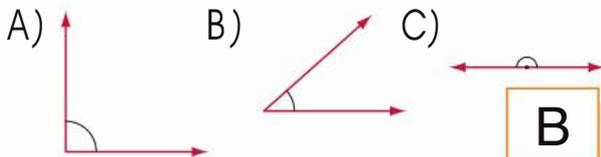
The area of the doll's house is shaded. Find the area.



116 cm<sup>2</sup>

16. [Shapes]

Which angle is an acute angle?



B

17. [Location]

In which seat is the man sitting?



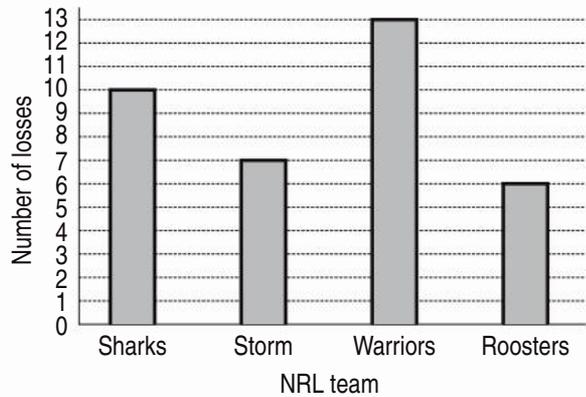
E3

18. [Statistics / Probability]

Use the table to complete the graph.

NRL Clubs - losses in 2019

NRL Club	Losses	NRL Club	Losses
Sharks	10	Warriors	11
Storm	3	Roosters	6



19. [Problem Solving 1]

Bill counted the rings by 6s.



How many rings were left over when Val counted them by 4s?

2

20. [Problem Solving 2] \*

Between 6:00 am and 7:00 am the temperature rose 1°C. Every hour after that the temperature rose by 2°C. By 1:00 pm the temperature was 28°C. What was the temperature at 6:00 am?

15 °C

21. [Problem Solving 3] \*

If  $20 \times 6 = 120$ , then

$22 \times 6 =$  132

# MATHS MATE



## Teacher Resource



### **Teacher's Guide to the Use of Maths Mate**

pages i - viii



### **Student Workbook Answers**

pages 3 - 72



### **Student Workbook Short Answers**

pages 1 - 8



### **Problem Solving Hints & Solutions**

pages 1 - 19



### **Test Masters**

pages 1 - 32



### **Test Answers**

pages 1 - 32



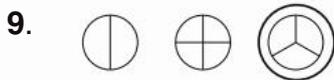
### **Record Keeping Sheets**

pages 1 - 10



### 1.1

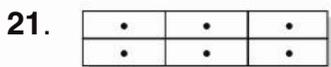
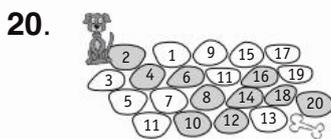
1. 7
2. 11
3. 5
4. 10
5. 13
6. 18
7. 4
8.  $13 + 9 = 22$  h



10. 79
11. 16
12. 50 cents
13. 12, 14
14. Thursday



17. behind
18. 2
- 19.



### 1.2

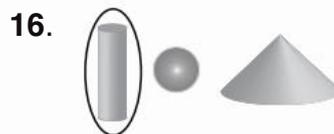
1. 5
2.  $7 + 8 = 15$
3. 6
4. 15
5. 130
6. 45
7. 6
8.  $8 + 4 = 12$



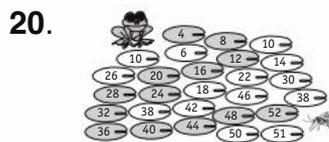
10. 715
11. 34
- 12.
13. 17, 19

14. Saturday

15. C

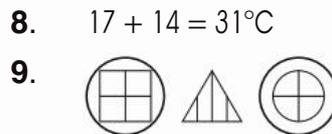


17. under
18. 3 dollars
- 19.



### 1.3

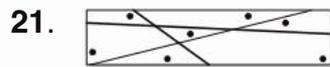
1. 9
2. 4
3. 3
4. 12
5. 15
6. 21
7. 8
8.  $17 + 14 = 31^\circ\text{C}$



10. 5 tens 3 ones = 53
11. 79
- 12.

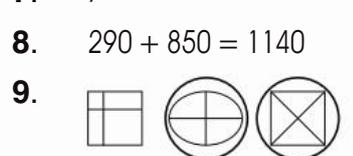
13. 17, 20
14. Tuesday
15. C
16. cube
17. above

18. 4
19. 2, 3 and 5



### 1.4

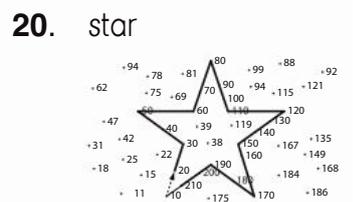
1. 8
2.  $12 - 7 = 5$
3. 5
4. 16
5. 27
6. 20
7. 7
8.  $290 + 850 = 1140$



10. 4 tens 6 ones = 46
11. 98
- 12.

13. 55, 65
14. Wednesday
15. B
16. cone
17. inside
18. 5

19. 1, 3 and 4





### 1.5

- 79, 80, 81
- 
- 7
- 7, 10, 13, 12, 15
- 9, 5, 1, 2, 0
- 9, 21, 27, 36, 30
- 5
- $48 - 25 = 23$
- 
- 521
- seventeen
- 
- 8, 6
- 
- A
- 
- Albert Einstein
- 12
- \$1.20
- 25
- 12

### 1.6

- 101, 102, 103
- 
- 4
- 9, 14, 12, 13, 16
- 9, 7, 2, 5, 0
- 10, 18, 12, 16, 6
- 8
- $93 - 47 = 46$  m
- 
- 359
- sixteen
- 10 dollars
- 12, 9
- 4/4/2021  
OR 4 April 2021
- C
- 
- Moyle
- 8
- \$1.60
- 10
- 15

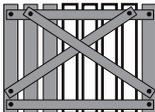
### 1.7

- 20, 19, 18, 17, 16, 15
- $8 + 6 + 2 = 16$
- 4 groups of 2 ears = 8 ears
- 14, 10, 11, 13, 7
- 4, 0, 8, 5, 9
- 16, 80, 40, 88, 32
- 4
- $1995 - 1945 = 50$  years
- 
- 7905
- forty-five
- C
- 10, 5
- 4
- C
- 
- Mahatma Ghandi
- 
- 25¢
- 15
- 8

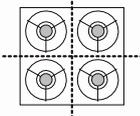
### 1.8

- 208, 209, 210, 211, 212
- $5 + 7 + 3 + 8 = 23$
- 5 groups of 4 notes = 20 notes
- 6, 13, 11, 9, 12
- 5, 2, 6, 1, 9
- 36, 12, 48, 4, 28
- 7
- $251 - 190 = 61$  cm
- 
- 2046
- eighty-seven
- B
- 40, 30
- Sunday
- B
- 
- 
- | Number | Tally |
|--------|-------|
| 9      |       |
- \$22.50
- 14
- 16

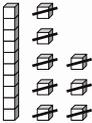
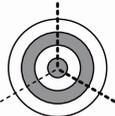
#### 2.1

1. 3, 6, 9, 12, 15, 18
2. 19
3. 24
4. 17, 20, 16, 25, 18
5. 34
6. 21, 12, 24, 30, 6
7. 8
8.  $9 \times 3 = 27$  L
9. 
10. 8 hundreds 0 tens  
5 ones
11. 70
12. \$1.50
13. 25, 28
14. May
15. C
16. square
17. Tidmouth
18. New Zealand
19. yes
20. 84
21. 4 

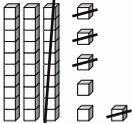
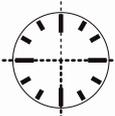
#### 2.2

1. 35
2.  $42 + 100 = 142$
3.  $2 \times 10 = 20$
4. 16, 21, 15, 12, 17
5. 21
6. 8, 20, 16, 6, 12
7. 7
8.  $5 \times 10 = 50$  L
9. 
10. 6 hundreds 3 tens  
7 ones
11. 40
12. 90¢
13. 26, 31
14. June
15. C
16. 9
17. Big Banana
18. 40 min
19. 4s
20. 70
21. B

#### 2.3

1. 4, 8, 12, 16, 20, 24
2. 10 
3. 4
4. 21, 16, 24, 17, 13
5. 72
6. 40, 45, 25, 5, 30
7. 4
8.  $6 \times 10 = 60$
9. 
10. 4032
11. eighty
12. \$3.20
13. 100, 110
14. 30
15. A
16. 8
17. Fossil Plants
18. heart
19. 3s
20. 53
21. A

#### 2.4

1. 2, 4, 6, 8, 10, 12
2. 22 
3. 5
4. 20, 16, 12, 23, 27
5. 11
6. 14, 21, 63, 28, 0
7. 9
8.  $7 \times 4 = 28$
9. 
10. 3564
11. sixty
12. \$12.30
13. 22, 26
14. summer
15. B
16. 12
17. A
18. Statue of Liberty
19. no
20. 35
21. 4 



### 2.5

- 400, 500, 600, 700, 800
- 14
- 30, 30
- 58
- 2, 3, 8, 6, 15
- 24, 40, 28, 12, 36
- 7, 11, 5, 3, 9
- $10 \div 5 = 2$  weeks
- 2 out of 5
- $485 = 400 + 80 + 5$
- three hundred
- 
- 6, 3
- to
- B
- 
- Lulu
- | Days in the months |         |        |
|--------------------|---------|--------|
| Months with...     | Tally   | Number |
| 28/29 days         | I       | 1      |
| 30 days            | IIII    | 4      |
| 31 days            | IIII II | 7      |
- 10
- 3
- 100 g

### 2.6

- 36, 46, 56, 66, 76, 86
- 17
- 54, 54
- 59
- 5, 12, 6, 9, 3
- 70, 28, 63, 0, 49
- 9, 4, 5, 8, 2
- $35 \div 7 = 5$
- $\frac{2}{3}$
- $680 = 600 + 80 + 0$
- eight hundred and three
- 
- 25, 15
- past
- A
- rhombus
- duck
- | People per square kilometre |           |        |
|-----------------------------|-----------|--------|
| Country                     | Tally     | Number |
| Australia                   | III       | 3      |
| New Zealand                 | IIII II I | 16     |
| Russia                      | IIII IIII | 9      |
| Canada                      | IIII      | 4      |
- 12
- 6
- 60 g

### 2.7

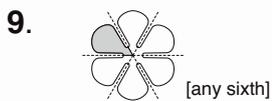
- 71, 61, 51, 41, 31, 21
- 9
- 3
- 93
- 15, 10, 18, 14, 9
- 18, 6, 30, 24, 48
- 7, 3, 4, 6, 5
- $32 \div 8 = 4$
- 
- $1852 = 1000 + 800 + 50 + 2$
- 209
- 
- 7, 2
- to
- B
- rectangle and triangle
- 5
- | Days of fog - San Francisco |           |        |
|-----------------------------|-----------|--------|
| Month 2012                  | Tally     | Number |
| March                       | IIII II I | 11     |
| May                         | IIII      | 5      |
| July                        | IIII II   | 10     |
| September                   | IIII IIII | 9      |
- 14
- 5
- 200 g

### 2.8

- 480, 490, 500, 510, 520
- 17
- 5
- 70
- 6, 1, 12, 17, 8
- 72, 0, 48, 32, 56
- 6, 10, 7, 3, 8
- $240 \div 8 = 30$
- 
- $2346 = 2000 + 300 + 40 + 6$
- 350
- 
- 14, 10
- past
- A
- square and hexagon
- 
- | Number of PMs representing the state* |           |
|---------------------------------------|-----------|
| State                                 | Tally     |
| NSW                                   | IIII II I |
| VIC                                   | IIII II   |
| QLD                                   | IIII      |
| TAS                                   | I         |
| WA                                    | I         |
- 12
- 9
- 80 g

### 3.1

1. 2, 4, 6, 8, 10, 12, 14
2. 8
3. 6
4. 79
5. 43
6. 36, 81, 63, 45, 54
7. 4, 7, 6, 5, 3
8.  $19 + 17 = 36$



10. B

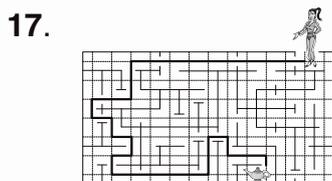
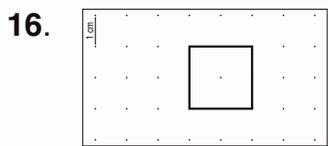
11. 419

12. A & C

13. 64, 74



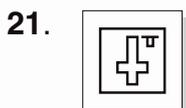
15. 7 cm



18. B

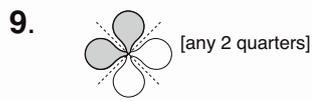
19. 24

20. 100



### 3.2

1. 3, 6, 9, 12, 15, 18, 21
2. 7
3.  $2 \times 8 = 16$
4. 96
5. 4
6. 15, 40, 10, 25, 20
7. 1, 4, 5, 2, 8
8.  $20 - 12 = 8$



10. A

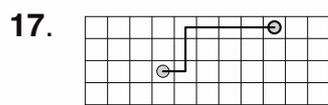
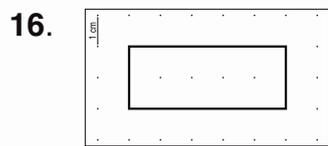
11. 746

12. B & C

13. 34, 40



15. 2 m



18. A

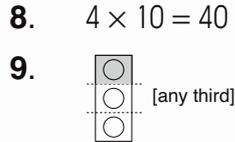
19. 21

20. 5



### 3.3

1. 5, 10, 15, 20, 25, 30, 35
2. 9
3. 30
4. 728
5. 28
6. 56, 48, 72, 24, 16
7. 5, 3, 2, 8, 4
8.  $4 \times 10 = 40$



10. ~~7~~ 0 2 5

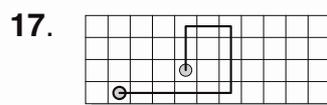
11. 235

12. A & B

13. 52, 57



15. 6 L



18. B

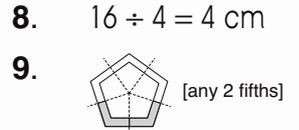
19. 25

20. 6



### 3.4

1. 100, 200, 300, 400, 500, 600
2. 16
3. 60
4. 477
5. 32
6. 24, 15, 12, 18, 27
7. 2, 6, 1, 3, 7
8.  $16 \div 4 = 4$  cm



10. ~~3~~ 6 7 2

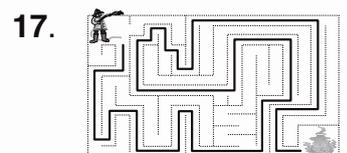
11. 862

12. B & C

13. 46, 50



15. 180 g



18. B

19. 30

20. 14





#### 3.5

1. 12, 15, 18, 21, 24, 27
2. 534
3. 5
4. 428
5. 132
6. 60
7. 5, 4, 6, 1, 7
8.  $3 \times 4 = 12$
9. 
10. true
11. two hundred and thirteen
12. 5
13. 5, 1
14. B
15. 12 cm
16. 4
17. slide
18. 4
19. 10
20. 11
21. 14

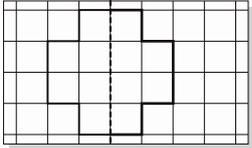
#### 3.6

1. 8, 12, 16, 20, 24, 28
2.  $400 + 60 + 7 = 467$
3. 4
4. 292
5. 123
6. 350
7. 10, 3, 5, 7, 4
8.  $40 - 36 = 4$
9. 
10. false
11. four hundred and fifty-three
12. 4
13. 16, 6
14. C
15. 18 cm
16. 4
17. turn
18. 3
19. 30
20. 16
21. 7

#### 3.7

1. 215, 220, 225, 230  
235
2.  $34 - 12 = 22$
3. 36
4. 540
5. 407
6. 240
7. 1, 3, 6, 8, 9
8.  $8 \div 2 = 4$
9.  $\frac{1}{2}$
10.  $<$
11. six hundred and nineteen
12. 16
13. 12, 6
14. C
15. 18 cm
16. 3
17. flip
18. 6
19. 14
20. \$25
21. 13

#### 3.8

1. 48, 54, 60, 66, 72, 78
2.  $157 - 24 = 133$
3. 56
4. 805
5. 25
6. 540
7. 4, 8, 2, 10, 9
8.  $363 + 210 = 573$  km
9.  $\frac{3}{4}$
10.  $>$
11. seven hundred and forty-five
12. 7
13. 10, 1
14. B
15. 16 cm
16. 5
17. 
18. 11
19. 12
20. \$180
21. 11

### 4.1

- 13, 1, 17, 22, 16, 51, 105
- 18
- $7 \times 6 = 42$
- 821
- 7, 16, 9, 13, 18
- 15
- 7
- $3 \times 5 = 15$  years
- $\frac{2}{3} = \frac{4}{6}$
- 73
- 7000
- 80¢
- 10, 11
- false
- $8 \text{ cm}^2$
- D
- car
- A
- 6 and 9
- A
- $$\begin{array}{r} 6 \quad 5 \\ + 3 \quad 1 \\ \hline 9 \quad 6 \end{array}$$

### 4.2

- 18, 1, 16, 27, 13, 4, 100
- 17
- $6 \times 8 = 48$
- 913
- 9, 14, 3, 18, 12
- 12
- 5
- $8 \div 4 = 2$
- $\frac{6}{8} = \frac{3}{4}$
- 256
- 2400
- \$4.40
- 12, 15
- 12:15 pm
- $12 \text{ cm}^2$
- 
- circle
- B
- 6 and 11
- C
- $$\begin{array}{r} 6 \quad 9 \\ - 5 \quad 6 \\ \hline 1 \quad 3 \end{array}$$

### 4.3

- 27
- $22 + 46 = 68$
- 8
- 7551
- 18, 13, 11, 5, 1
- 42
- 7
- $34 - 26 = 8$  years
- $\frac{8}{10} = \frac{4}{5}$
- 738
- 3045
- \$14.10
- 16, 18
- 1:25 am
- $9 \text{ cm}^2$
- 
- B
- heads, tails
- 7 and 14
- C
- $$\begin{array}{r} 5 \quad 8 \\ - 2 \quad 4 \\ \hline 3 \quad 4 \end{array}$$

### 4.4

- 92
- $77 + 13 = 90$
- 10
- 9306
- 16, 5, 8, 13, 6
- 40
- 12
- $91 + 19 = 110$
- $\frac{3}{6} = \frac{2}{4}$
- 426
- 6002
- \$2.30
- 12, 16
- 7:45 am
- $10 \text{ cm}^2$
- 
- saw
- north, east, south west
- 9 and 18
- B
- $$\begin{array}{r} 6 \quad 2 \\ + 1 \quad 6 \\ \hline 7 \quad 8 \end{array}$$

### 4.5

- 
- 4
- 10
- 17, 22, 26, 15, 20
- 226
- 72
- 2
- $13 + 2 + 3 = 18$
- $>$
- 66, 69, 96, 99
- six thousand
- \$18
- 4, 2
- four fifteen OR a quarter past four
- $20 \text{ cm}^2$
- B
- B
- 
- 3
- 120 cm
- 110

### 4.6

- 
- 5
- 5
- 13, 25, 20, 16, 22
- 206
- 36
- 10
- $114 - 76 = 38 \text{ cm}$
- $=$
- 501, 115, 105, 55, 15
- four thousand and seven
- \$49
- 5, 3
- nine forty-five OR a quarter to ten
- B
- 
- B
- | Birth type  | Number of babies |
|-------------|------------------|
| Triples     | 3                |
| Quadruplets | 4                |
| Sextuplets  | 6                |
- 2
- 400 cm
- 99

### 4.7

- 
- 5, 5
- 7
- 22, 27, 15, 26, 21
- 483
- 35
- 24
- $5 \times 6 = 30 \text{ seconds}$
- $<$
- 
- 81, 152, 205, 212, 515
- six thousand and thirty
- 90¢
- 4, 3
- five to five OR four fifty-five
- C
- 
- D
- | Polygon  | Number of sides |
|----------|-----------------|
| Hexagon  | 6               |
| Triangle | 3               |
| Pentagon | 5               |
- 1
- 56 km
- 208

### 4.8

- 
- 11, 11
- 9
- 23, 18, 20, 26, 24
- 515
- 36
- 35
- $12 \div 4 = 3$
- $>$
- 
- 843, 834, 438, 384, 348
- seven thousand and fifty-two
- \$3.90
- 4, 0
- twenty past seven OR seven twenty
- $116 \text{ cm}^2$
- B
- E3
- 
- 2
- $15^\circ\text{C}$
- 132

# MATHS MATE



## Teacher Resource



### **Teacher's Guide to the Use of Maths Mate**

pages i - viii



### **Student Workbook Answers**

pages 3 - 72



### **Student Workbook Short Answers**

pages 1 - 8



### **Problem Solving Hints & Solutions**

pages 1 - 19



### **Test Masters**

pages 1 - 32



### **Test Answers**

pages 1 - 32



### **Record Keeping Sheets**

pages 1 - 10



A Teacher's Guide to approaching  
**PROBLEM SOLVING**

*Dear Educator*

*The following Problem Solving Hints & Solutions have been designed to support users of the Maths Mate Program.*

*The Maths Mate problem solving questions at each level have proved challenging for many.*

*Within these Hints & Solutions only one or two alternative strategies have been presented to show how the problem may be solved. Often many other approaches are both practical and possible; after all, "the human race has not really started to 'think'." - Edward De Bono*

*Outlined on this page is a general problem solving approach that may help you to develop the problem solving skills of your students.*

*Inevitably, students are more likely to be successful if they:*

- *have the courage to try,*
- *can find a place to start and*
- *have approach options to choose from.*

*Best wishes*

*The Maths Mate Team*

**FIRST:**

- \* Accept the challenge.
- \* Read the problem.
- \* Read the problem out loud.

**THEN:**

- \* Find out the meaning of any unknown terms.
- \* Highlight the essential truths.
- \* Restate the problem in your own words.
- \* Break the problem up into parts.

**BE SURE ABOUT:**

- \* What you know from the problem. (Given)
- \* What you need to find out. (Goal)

**CHOOSE YOUR SOLUTION STRATEGY/STRATEGIES:**

1. Write a numerical sentence deciding which operations to use, given the word statements.
2. Look for a pattern then make and test generalisations that describe the relationship between variables.
3. Draw a diagram: sketch  
table  
graph  
number line  
  
OR Make a model.
4. Simplify the problem and work on a reduced version. Extrapolate back to the original problem.
5. Be systematic. Make a list. Progress step by step.
6. Work backwards if you have the answer.
7. Use trial and error. Estimate, check against the facts and then refine your estimation.

**WHERE TO START:**

- \* Start: with what is known  
with an odd or distinctive feature  
with the smallest  
with the easiest.

**FINALLY:**

- \* Double check your answer against the original statements. Does your answer satisfy all the conditions of the problem?

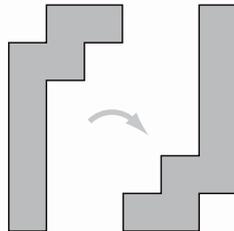
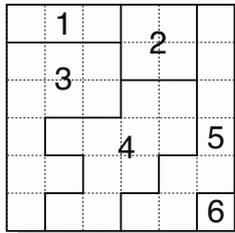
**PRESENTATION:**

- \* Choose suitable modes of communication to present and explain your outcomes and results.

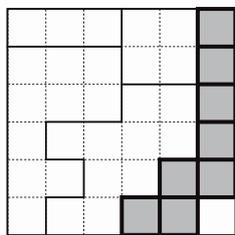
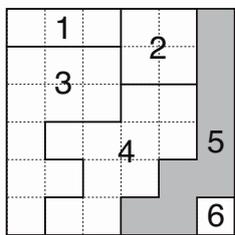


#### 1.1

- 19. Hint:** Identify the 6 different shapes on the grid.  
OR Trace and cut out the shape and lay it over the grid.
- Solution:** Consider each of the 6 different outlined shapes in the grid.

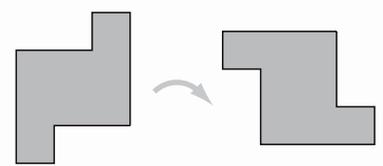
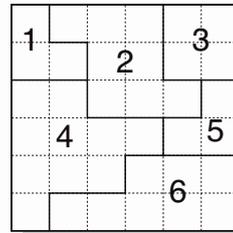


The shape can be found in position 5.

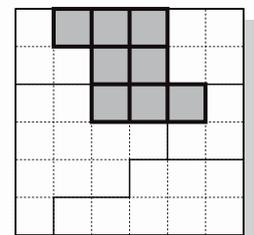
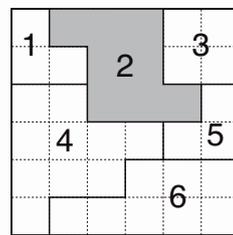


#### 1.2

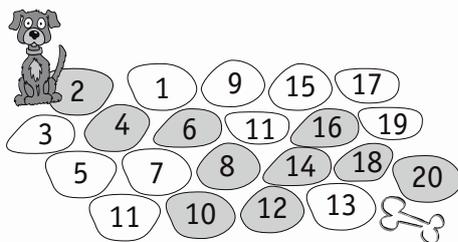
- 19. Hint:** Identify the 6 different shapes on the grid.  
OR Trace and cut out the shape and lay it over the grid.
- Solution:** Consider each of the 6 different outlined shapes in the grid.



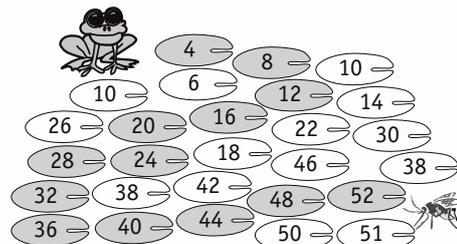
The shape can be found in position 2.



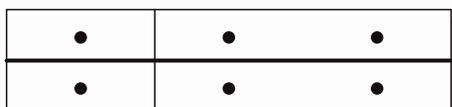
- 20. Hint:** Count by 2s and write down the results to 20.
- Solution:** Start at 2. Write a list counting by 2s to 20.  
2, 4, 6, 8, 10, 12, 14, 16, 18, 20 (all even numbers)  
Colour the numbers on the path in order.



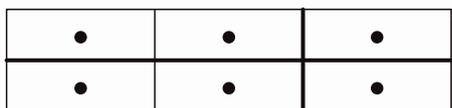
- 20. Hint:** Count by 4s and write down the results to 52.
- Solution:** Start at 4. Write a list counting by 4s to 52.  
4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52  
(all even numbers)  
Colour the numbers on the path in order.



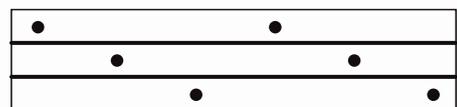
- 21. Hint:** What line can you draw to separate as many dots as possible? Use trial and error.
- Solution:** Six dots require 6 areas to be drawn.  
A horizontal line separating the top and bottom rows of dots will produce 4 areas.



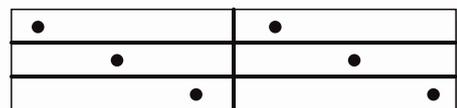
Adding a vertical line results in 6 areas.



- 21. Hint:** What line can you draw to separate as many dots as possible? Use trial and error.
- Solution:** Six dots require 6 areas to be drawn.  
Two horizontal lines will separate the dots into rows. This produces 3 areas.

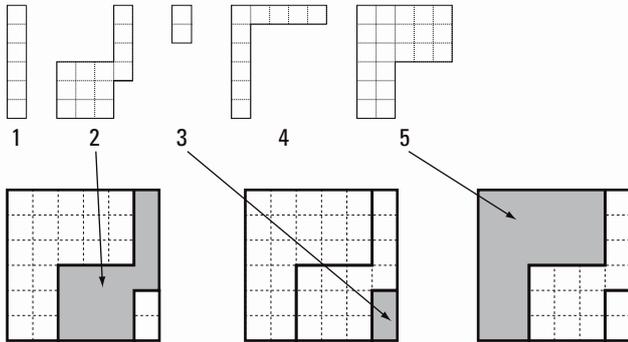


Adding a vertical line results in 6 areas.



1.3

19. **Hint:** Try to identify any of the 5 different shapes on the grid. OR Trace and cut out each shape. Lay the shapes over the grid. Try to find a match.  
**Solution:** Consider each of the 5 different outlined shapes in the grid.



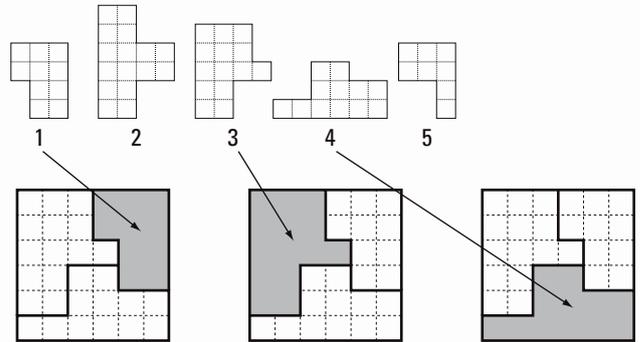
The shapes 2, 3 and 5 were used to complete the grid.

1.4



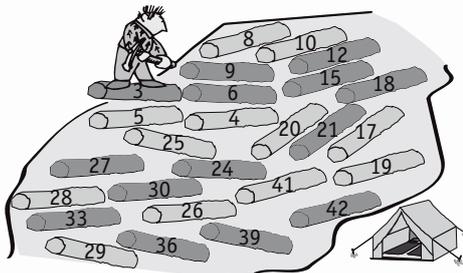
1.3 - 1.4

19. **Hint:** Try to identify any of the 5 different shapes on the grid. OR Trace and cut out each shape. Lay the shapes over the grid. Try to find a match.  
**Solution:** Consider each of the 5 different outlined shapes in the grid.

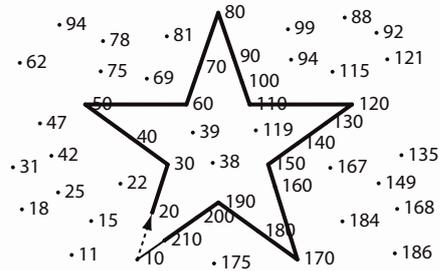


The shapes 1, 3 and 4 were used to complete the grid.

20. **Hint:** Count by 3s and write down the results to 42.  
**Solution:** Start at 3. Write a list counting by 3s to 42.  
 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42  
 Colour the numbers on the path in order.

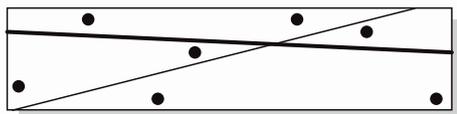


20. **Hint:** Count by 10s and join all the results as you count.  
**Solution:** Start at 10. Count by 10s:  
 10, 20, 30, 40, 50, 60 .....  
 Once you have established the pattern, connect the numbers in order.

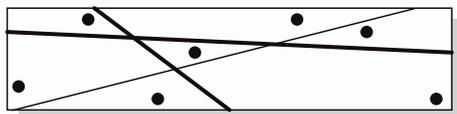


A star has been drawn.

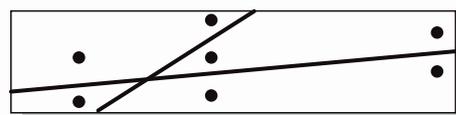
21. **Hint:** What line can you draw to separate as many dots as possible? Use trial and error.  
**Solution:** Seven dots require 7 areas to be drawn. Draw a line separating the top row of 3 dots from the others. This will produce 4 areas.



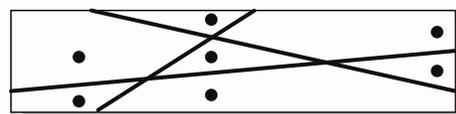
Adding another line results in 7 areas.



21. **Hint:** What line can you draw to separate as many dots as possible? Use trial and error.  
**Solution:** Seven dots require 7 areas to be drawn. Draw a line separating the bottom row of 3 dots. Draw another line with 3 dots on the left. This will produce 4 areas.



Draw another line with 3 dots on the right. This will produce 7 areas.



- 19. Hint:** Calculate the cost of four chocolates. Add the dollars, then add the cents.

**Solution:** The cost of one chocolate is \$2.20

To calculate the cost of four chocolates:

Add the dollars four times:

$$\$2 + \$2 + \$2 + \$2 = \$8$$

Add the cents four times:

$$20\text{¢} + 20\text{¢} + 20\text{¢} + 20\text{¢} = 80\text{¢}$$

Add the totals:

$$\$8 + 80\text{¢} = \$8.80$$

To calculate the change:

Subtract the \$8.80 cost from your \$10.

Building up:

$$\$8.80 \text{ to } \$9 \text{ is } 20\text{¢}$$

$$\$9 \text{ to } \$10 \text{ is } \$1$$

Adding the totals:

$$\$1 + 20\text{¢} = \$1.20$$

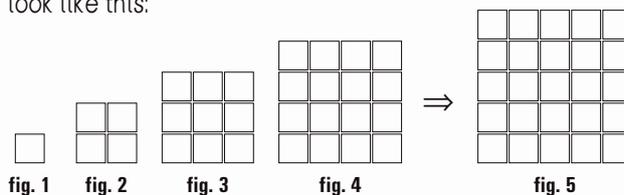
You will receive **\$1.20** change.

- 20. Hint:** Count the number of squares in each figure. OR Consider the pattern. How many small squares along a side of each figure? Try to draw the next figure.

**Solution:** A table of results would look like this:

Figure	Number of squares along a side	Number of squares
<b>1</b>	1	$1 \times 1 = 1$
<b>2</b>	2	$2 \times 2 = 4$
<b>3</b>	3	$3 \times 3 = 9$
<b>4</b>	4	$4 \times 4 = 16$
<b>5</b>	?	$? \times ? = ?$

The next figure would have 5 squares along a side and look like this:



You can count the squares. OR Notice the relationship between the side lengths and the total number of squares in a figure.

The number of squares in figure 5 is  $5 \times 5 = 25$ .

- 21. Hint:** Consider how many 'combos' are available for one size of popcorn only.

**Solution:** If you have a small popcorn you can have either a small, medium or large lemonade with it.

So small popcorn  $\Rightarrow$  3 'combos'

If you have a medium popcorn you can have either a small, medium or large lemonade with it.

So medium popcorn  $\Rightarrow$  3 'combos'

Continuing this idea:

$$4 \text{ popcorn sizes} \Rightarrow 3 + 3 + 3 + 3 = 12 \text{ 'combos'}$$

There are **12** different 'combos' available.



- 19. Hint:** Calculate the cost of four bread sticks. Add the dollars, then add the cents.

**Solution:** The cost of one bread stick is \$2.10

To calculate the cost of four bread sticks:

Add the dollars four times:

$$\$2 + \$2 + \$2 + \$2 = \$8$$

Add the cents four times:

$$10\text{¢} + 10\text{¢} + 10\text{¢} + 10\text{¢} = 40\text{¢}$$

Add the totals:

$$\$8 + 40\text{¢} = \$8.40$$

To calculate the change:

Subtract the \$8.40 cost from your \$10.

Building up:

$$\$8.40 \text{ to } \$9 \text{ is } 60\text{¢}$$

$$\$9 \text{ to } \$10 \text{ is } \$1$$

Adding the totals:

$$\$1 + 60\text{¢} = \$1.60$$

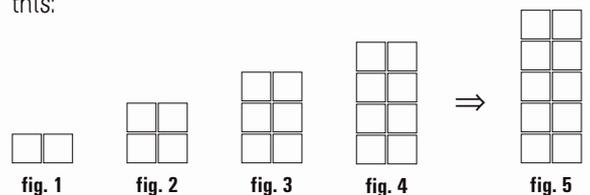
You will receive **\$1.60** change.

- 20. Hint:** Count the number of squares in each figure. OR Consider the pattern. How many squares high is each figure? Try to draw the next figure.

**Solution:** A table of results would look like this:

Figure	Number of squares high	Number of squares
<b>1</b>	1	$2 \times 1 = 2$
<b>2</b>	2	$2 \times 2 = 4$
<b>3</b>	3	$2 \times 3 = 6$
<b>4</b>	4	$2 \times 4 = 8$
<b>5</b>	?	$? \times ? = ?$

The next figure would be 5 squares high and look like this:



You can count the squares. OR Notice the relationship between the number of squares high and the total number of squares in a figure.

The number of squares in figure 5 is  $2 \times 5 = 10$ .

- 21. Hint:** Consider how many discount orders are available for one main only.

**Solution:** If you have a hamburger you can have either an apple pie, a jelly slice or a sundae with it.

So a hamburger  $\Rightarrow$  3 discount orders

If you have a cheeseburger you can have either an apple pie, a jelly slice or a sundae with it.

So a cheeseburger  $\Rightarrow$  3 discount orders

Continuing this idea:

$$5 \text{ mains} \Rightarrow 3 + 3 + 3 + 3 + 3 = 15 \text{ discount orders}$$

There can be **15** discount orders served at 'Hungry's'.

19. **Hint:** Calculate the cost of three markers. Add the dollars, then add the cents.

**Solution:** The cost of one marker is \$3.25

To calculate the cost of three markers:

Add the dollars three times:

$$\$3 + \$3 + \$3 = \$9$$

Add the cents three times:

$$25\text{¢} + 25\text{¢} + 25\text{¢} = 75\text{¢}$$

Add the totals:

$$\$9 + 75\text{¢} = \$9.75$$

To calculate the change:

Subtract the \$9.75 cost from your \$10.

Building up:

$$\$9.75 \text{ to } \$10 \text{ is } 25\text{¢}$$

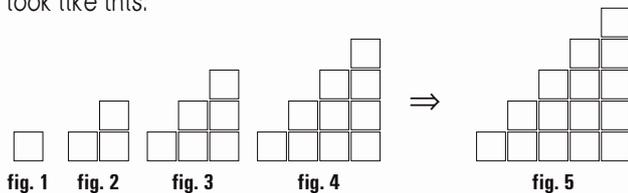
You will receive **25¢** change.

20. **Hint:** Count the number of squares in each figure. OR Consider the pattern. How many squares along each row of a figure? Try to draw the next figure.

**Solution:** A table of results would look like this:

Figure	Number of squares along a side	Number of squares in each row
1	1	1
2	2	$2 + 1 = 3$
3	3	$3 + 2 + 1 = 6$
4	4	$4 + 3 + 2 + 1 = 10$
5	?	$? + 4 + 3 + 2 + 1 = ?$

The next figure would have 5 squares along a side and look like this:



You can count the squares. OR Notice the relationship between the number of squares in each row as you go up.

The number of squares in figure 5 is

$$5 + 4 + 3 + 2 + 1 = 15$$

21. **Hint:** Consider how many orders are possible for one flavour only.

**Solution:** If you have a mango smoothie you can have either a small or large size.

So mango smoothie  $\Rightarrow$  2 orders

If you have a strawberry smoothie you can have either a small or large size.

So strawberry smoothie  $\Rightarrow$  2 orders

Continuing this idea:

$$4 \text{ smoothie flavours } \Rightarrow 2 + 2 + 2 + 2 = 8 \text{ orders}$$

There are **8** different orders possible.



19. **Hint:** Consider what happens to a number when you halve it? Consider doubling facts to check your answer.

**Solution:** The cost of the board shorts is \$45

To halve \$45 break it down to \$40 and \$5.

Consider \$40: Half of \$40 is \$20.

To halve \$5 break it down to \$4 and \$1

Consider \$4: Half of \$4 is \$2.

Consider \$1: Half of \$1 is 50¢.

Add the totals:

$$\$20 + \$2 + 50\text{¢} = \$22.50$$

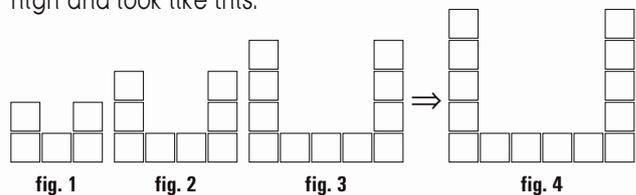
In a half price sale you would pay **\$22.50** for the board shorts.

20. **Hint:** Count the number of squares in each figure. OR Consider the pattern. How many squares wide and high is each figure? Try to draw the next figure.

**Solution:** A table of results would look like this:

Figure	Number of squares wide	Number of squares high	Number of squares
1	3	2	$3 + 2 = 5$
2	4	3	$4 + 4 = 8$
3	5	4	$5 + 6 = 11$
4	?	?	$? + ? = ?$

The next figure would be 6 squares wide and 5 squares high and look like this:



You can count the squares. OR Notice the relationship between the width and height and the total number of squares in a figure.

The number of squares in figure 4 is  $6 + 8 = 14$

21. **Hint:** Consider how many choices are available after a student has chosen one sport.

**Solution:** If a student chooses swimming as their sport, they can choose either archery, rock climbing, flying fox or abseiling as their activity.

So swimming  $\Rightarrow$  4 activity choices

If a student chooses running as their sport, they can choose either archery, rock climbing, flying fox or abseiling as their activity.

So running  $\Rightarrow$  4 activity choices

Continuing this idea:

$$4 \text{ sport choices } \Rightarrow 4 + 4 + 4 + 4 = 16 \text{ combinations}$$

There are **16** possible combinations.

19. **Hint:** Make a list.

**Solution:** Skip count from 30 by 3s and write down your results.

30, 33, 36, 39, 42, 45, 48, 51, 54, 57

**Yes,** Bill would say 54.

20. **Hint:** Consider each condition one at a time. Keep narrowing down the list of possibilities.

**Solution:**

2-digit number: any number from 10 to 99

4 in the units place: 14, 24, 34, 44, 54, 64, 74, 84, 94

Other digit is twice as big as 4:  $4 \times 2 = 8$

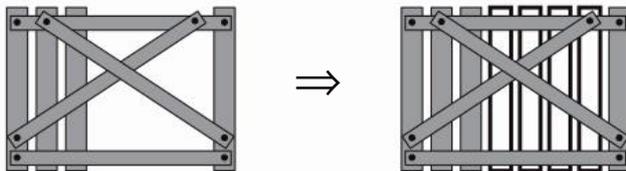
The tens digit is 8.

The only number that fits all conditions is 84.

The number is **84**.

21. **Hint:** Sketch the pickets in place.

**Solution:** Try to draw pickets in the space. Check your estimation by using a piece of paper or a ruler to measure the width of each picket you have drawn.



**4** pickets have fallen off the gate.



19. **Hint:** Use trial and error. Make a list.

**Solution:** Skip count from 32 by 3s, 4s and 8s and write down your results.

Try 3s:

32, 35, 38, 41, 44, 47, 50, 53, 56, 59, 62 ..... incorrect

Try 4s:

32, 36, 40, 44, 48, 52, 56, **60** ..... correct

Try 8s:

32, 40, 48, 56, 64, 72 ..... incorrect

Des counted by **4s**.

20. **Hint:** Consider each condition one at a time. Keep narrowing down the list of possibilities.

**Solution:**

2-digit number: any number from 10 to 99

7 in the tens place: 70, 71, 72, 73, 74, 75, 76, 77, 78, 79

If you say this number when you count by 10s, it must end in 0.

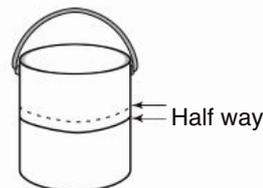
The only number that fits all conditions is 70.

The number is **70**.

21. **Hint:** Determine how much paint would be in half a tin of paint. Mark half way with an arrow.

**Solution:** If the tin of paint was half full then it would contain half of 10 L which would be 5 L.

The arrow is just above this position.



There would be **6** L of paint in the tin.

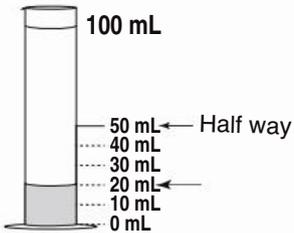
The answer is **B**.

**2.3**

- 19. Hint:** Use trial and error. Make a list.  
**Solution:** Skip count from 20 by 3s, 4s and 5s and write down your results.  
 Try 3s:  
 20, 23, 26, 29, 32, 35, 38 ..... correct  
 Try 4s:  
 20, 24, 28, 32, 36, 40 ..... incorrect  
 Try 5s:  
 20, 25, 30, 35, 40, 45 ..... incorrect  
 Pepe counted by **3s**.

- 20. Hint:** Consider each condition one at a time. Keep narrowing down the list of possibilities.  
**Solution:**  
 2-digit number: any number from 10 to 99  
 3 in the units place: 13, 23, 33, 43, 53, 63, 73, 83, 93  
 total of digits is 8:  
 $1 + 3 = 4$   
 $2 + 3 = 5$   
 $3 + 3 = 6$   
 $4 + 3 = 7$   
 $5 + 3 = 8$   
 The only number that fits all conditions is 53.  
 The number is **53**.

- 21. Hint:** Determine how much liquid would be in half a cylinder. Mark half way with an arrow.  
**Solution:** If the cylinder was half full then it would contain half of 100 mL which would be 50 mL. The arrow is actually lower than this.  
 Divide the 50 mL into 5 equal parts.



There is approximately 20 mL of liquid in the cylinder.  
 The answer is **A**.

**2.4**

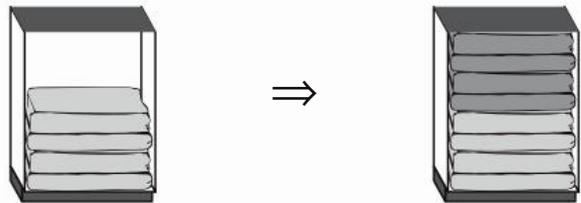


**2.3 - 2.4**

- 19. Hint:** Make a list.  
**Solution:** Skip count from 10 by 10s and write down your results.  
 10, 20, 30, 40, 50 ...  
 Jo did not reach 42.  
**No**, Jo could not be counting by 10s.

- 20. Hint:** Consider each condition one at a time. Keep narrowing down the list of possibilities.  
**Solution:**  
 Less than 40: any number from 0 to 39  
 Odd number: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39  
 Count by 5s: 5, 10, 15, 20, 25, 30, 35, 40  
 Count by 7s: 7, 14, 21, 28, 35  
 The only number that fits all conditions is 35.  
 The number is **35**.

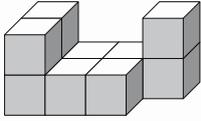
- 21. Hint:** Sketch the towels in place.  
**Solution:** Try to draw towels of similar thickness in the space. Check your estimation by using a piece of paper or a ruler to measure the width of each towel you have drawn.



You could place **4** more identical towels on this shelf.

19. **Hint:** Count the cubes in the top layer first. Note that in the bottom layer there may be cubes hidden from view. Remember, if there is a cube in the top layer then there must be a cube underneath.

**Solution:**



Top layer: 3 cubes  
 Bottom layer: 7 cubes  
 Altogether there are  $3 + 7$  cubes = 10 cubes  
 There are **10** cubes in this shape.

20. **Hint:** Make a systematic list in table format. Start with the largest coin and work backwards.

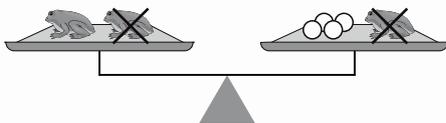
**Solution:**

Ways to make 50¢	20¢	10¢
1	20¢ + 20¢	+ 10¢
2	20¢	+ 10¢ + 10¢ + 10¢
3		10¢ + 10¢ + 10¢ + 10¢ + 10¢

You can make fifty cents using just 10 cent coins and 20 cent coins in **3** ways.

21. **Hint:** Consider the position of the balance beam. Compare each side of the balance. Determine how many marbles weigh the same as 1 frog.

**Solution:** If you took 1 frog away from both sides of the beam, then you would be left with 1 frog on one side and 4 marbles on the other side of the beam.



That means 1 frog weighs the same as 4 marbles.

If 1 marble weighs 25 grams then a frog weighs 4 times this.

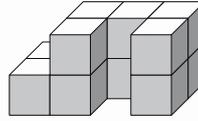
$$25 + 25 + 25 + 25 = 100 \text{ g}$$

A frog weighs **100 g**.



19. **Hint:** Count the cubes in the top layer first. Note that in the bottom layer there may be cubes hidden from view. Remember, if there is a cube in the top layer then there must be a cube underneath.

**Solution:**



Top layer: 5 cubes  
 Bottom layer: 7 cubes  
 Altogether there are  $5 + 7$  cubes = 12 cubes  
 There are **12** cubes in this shape.

20. **Hint:** Make a systematic list in table format. Start with the largest coin and work backwards.

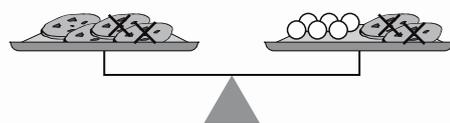
**Solution:**

Ways to make \$1	20¢	10¢
1	20¢ + 20¢ + 20¢ + 20¢ + 20¢	
2	20¢ + 20¢ + 20¢ + 20¢	+ 10¢ + 10¢
3	20¢ + 20¢ + 20¢	+ 10¢ + 10¢ + 10¢ + 10¢
4	20¢ + 20¢	+ 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢
5	20¢	+ 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢
6		10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢

You can make one dollar using just 10 cent coins and 20 cent coins in **6** ways.

21. **Hint:** Consider the position of the balance beam. Compare each side of the balance. Determine how many marbles weigh the same as 2 cookies.

**Solution:** If you took 2 cookies away from both sides of the beam, then you would be left with 2 cookies on one side and 6 marbles on the other side of the beam.



That means 2 cookies weigh the same as 6 marbles.

OR 1 cookie weighs the same as 3 marbles.

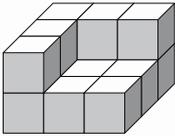
If 1 marble weighs 20 grams then a cookie weighs 3 times this.

$$20 + 20 + 20 = 60 \text{ g}$$

A cookie weighs **60 g**.

19. **Hint:** Count the cubes in the top layer first. Note that in the bottom layer there may be cubes hidden from view. Remember, if there is a cube in the top layer then there must be a cube underneath.

**Solution:**



Top layer: 5 cubes  
 Bottom layer: 9 cubes  
 Altogether there are  $5 + 9$  cubes = 14 cubes  
 There are **14** cubes in this shape.

20. **Hint:** Make a systematic list in table format. Start with the largest coin and work backwards.

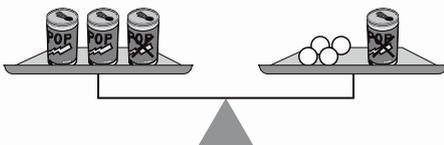
**Solution:**

Ways to make \$2	50¢	10¢
1	$50¢ + 50¢ + 50¢ + 50¢$	
2	$50¢ + 50¢ + 50¢$	$+ 5 \times 10¢$
3	$50¢ + 50¢$	$+ 10 \times 10¢$
4	$50¢$	$+ 15 \times 10¢$
5		$20 \times 10¢$

You can make two dollars using just 50 cent coins and 10 cent coins in **5** ways.

21. **Hint:** Consider the position of the balance beam. Compare each side of the balance. Determine how many marbles weigh the same as 2 cans.

**Solution:** If you took 1 can away from both sides of the beam, then you would be left with 2 cans on one side and 4 marbles on the other side of the beam.



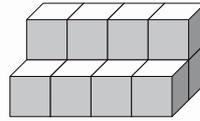
That means 2 cans weigh the same as 4 marbles.

OR 1 can weighs the same as 2 marbles.  
 If 1 marble weighs 100 grams then a can weighs 2 times this.  
 $100 + 100 = 200$  g  
 A can weighs **200** g.



19. **Hint:** Count the cubes in the top layer first. Note that in the bottom layer there may be cubes hidden from view. Remember, if there is a cube in the top layer then there must be a cube underneath.

**Solution:**



Top layer: 4 cubes  
 Bottom layer: 8 cubes  
 Altogether there are  $4 + 8$  cubes = 12 cubes  
 There are **12** cubes in this shape.

20. **Hint:** Make a systematic list in table format. Start with the largest coin and work backwards.

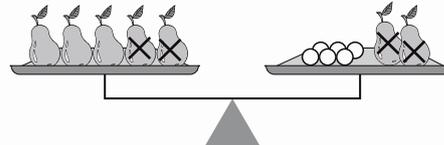
**Solution:**

Ways to make \$4	50¢	10¢
1	$50¢ + 50¢ + 50¢ + 50¢ + 50¢ + 50¢ + 50¢ + 50¢$	
2	$50¢ + 50¢ + 50¢ + 50¢ + 50¢ + 50¢ + 50¢$	$+ 5 \times 10¢$
3	$50¢ + 50¢ + 50¢ + 50¢ + 50¢ + 50¢$	$+ 10 \times 10¢$
4	$50¢ + 50¢ + 50¢ + 50¢ + 50¢$	$+ 15 \times 10¢$
5	$50¢ + 50¢ + 50¢ + 50¢$	$+ 20 \times 10¢$
6	$50¢ + 50¢ + 50¢$	$+ 25 \times 10¢$
7	$50¢ + 50¢$	$+ 30 \times 10¢$
8	$50¢$	$+ 35 \times 10¢$
9		$+ 40 \times 10¢$

You can make four dollars using just 50 cent coins and 10 cent coins in **9** ways.

21. **Hint:** Consider the position of the balance beam. Compare each side of the balance. Determine how many marbles weigh the same as 3 pears.

**Solution:** If you took 2 pears away from both sides of the beam, then you would be left with 3 pears on one side and 6 marbles on the other side of the beam.



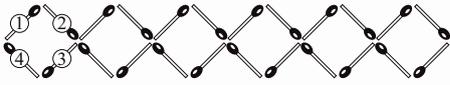
That means 3 pears weigh the same as 6 marbles.

OR 1 pear weighs the same as 2 marbles.  
 If 1 marble weighs 40 grams then a pear weighs two times this.  
 $40 + 40 = 80$  g  
 A pear weighs **80** g.

**3.1**

**19. Hint:** Count the matchsticks. OR Find how many matchsticks in 1 square and multiply by 6.

**Solution:**



One square has 4 matchsticks.

There are 6 squares.

So altogether there are:

$$4 \times 6 \text{ matchsticks} = 24 \text{ matchsticks}$$

There are **24** matchsticks in 6 squares.

**20. Hint:** Find the number of beads in 10 bags first.

**Solution:** We know one bag holds 5 beads. This means 10 bags hold 10 times that amount.

$$5 \times 10 = 50 \text{ beads}$$

There are 50 beads in 10 bags.

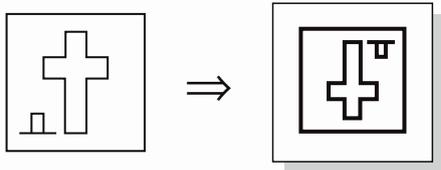
To get from 10 bags to 20 bags you have to double the number of bags so double the number of beads.

$$50 + 50 = 100 \text{ beads}$$

Ramona bought **100** beads.

**21. Hint:** Turn your page half a turn (up-side-down). Draw what you see now.

**Solution:**



**3.2**



**3.1 - 3.2**

**19. Hint:** Count the matchsticks. OR Find how many matchsticks in 1 triangle and multiply by 7.

**Solution:**



One triangle has 3 matchsticks.

There are 7 triangles.

So altogether there are:

$$3 \times 7 \text{ matchsticks} = 21 \text{ matchsticks}$$

There are **21** matchsticks in 7 triangles.

**20. Hint:** Find the number of photos that Gina can fit on 2 pages, 3 pages, etc.

**Solution:** We know that Gina can fit 4 photos on 1 page. So for every extra page, you need to add 4 more photos to the previous number of photos.

This means:

1 page holds 4 photos

2 pages hold 8 photos

3 pages hold 12 photos

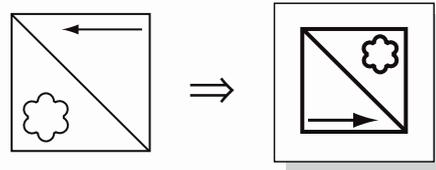
4 pages hold 16 photos

5 pages hold 20 photos

Gina will fill **5** pages with her photos.

**21. Hint:** Turn your page half a turn (up-side-down). Draw what you see now.

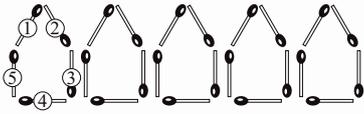
**Solution:**



**3.3**

19. **Hint:** Count the matchsticks. OR Find how many matchsticks in 1 house and multiply by 5.

**Solution:**



One house has 5 matchsticks.  
 There are 5 houses.  
 So altogether there are:  
 $5 \times 5$  matchsticks = 25 matchsticks  
 There are **25** matchsticks in 5 houses.

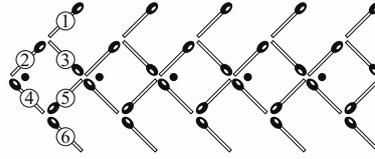
**3.4**



**3.3 - 3.4**

19. **Hint:** Count the matchsticks. OR Find how many matchsticks in 1 fish and multiply by 5.

**Solution:**



One fish has 6 matchsticks.  
 There are 5 fish.  
 So altogether there are:  
 $5 \times 6$  matchsticks = 30 matchsticks  
 There are **30** matchsticks in 5 fish.

20. **Hint:** Find the number of tulips in 2 bunches, 3 bunches, etc.

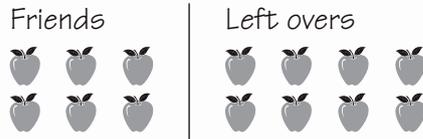
**Solution:** We know that 1 bunch has 5 tulips.  
 So for every extra bunch, you need to add 5 more tulips to the previous number of tulips.  
 This means:

- 1 bunch has 5 tulips
- 2 bunches have 10 tulips
- 3 bunches have 15 tulips
- 4 bunches have 20 tulips
- 5 bunches have 25 tulips
- 6 bunches have 30 tulips

Rita buys **6** bunches of tulips.

20. **Hint:** Draw a diagram.

**Solution:**

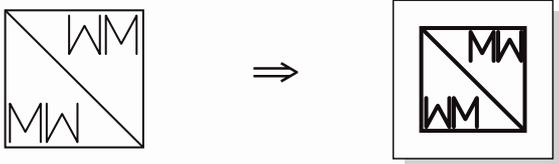


$6 + 8 = 14$

Hussein bought **14** apples.

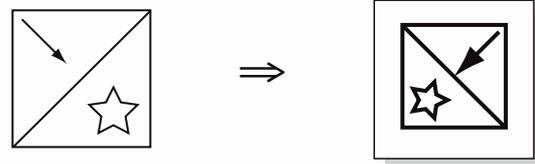
21. **Hint:** Turn your page half a turn (up-side-down). Draw what you see now.

**Solution:**



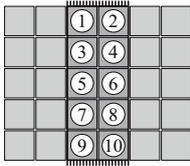
21. **Hint:** Turn your page a quarter of a turn clockwise. Draw what you see now.

**Solution:**



19. **Hint:** Visualise the grid of tiles as they would appear under the carpet. Count the tiles. OR Count the number of visible tiles and subtract from 30.

**Solution:**



OR 20 tiles are visible.  
 $30 - 20 = 10$

There are **10** tiles covered by the carpet.

20. **Hint:** Add all the prices. Break the addition down into smaller parts.

**Solution:** First add the whole dollars.

$$\$2.00 + \$1.00 + \$2.00 = \$5.00$$

Then add the items with 50 cents in their totals.

$$\$0.50 + \$1.50 + \$3.50 =$$

$$\$2.00 + \$3.50 = \$5.50$$

Adding these amounts together you get

$$\$5.00 + \$5.50 = \$10.50$$

Elizabeth needs **11** one-dollar coins to buy everything on her list.

21. **Hint:** How many dots along each side of the first square? What is the same about the dots on each figure? What is different about the dots on each figure? How do the number of dots change from square to square? Draw a table of results. Try to draw figure 5.

**Solution:** All figures have 1 dot on the left and 1 dot on the right.

The number of dots on the top and bottom of each square changes as shown.

Figure	Left	Right	Top	Bottom
1	1	1	2	2
2	1	1	3	3
3	1	1	4	4
4	1	1	5	5
5	1	1	?	?

Following this idea there would be 6 dots on the top and 6 dots on the bottom of figure 5.

Figure 5 would look like this:

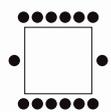


fig. 5

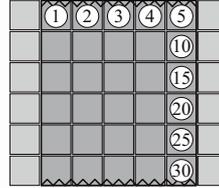
Adding the number of dots in figure 5 you get  
 $1 + 1 + 6 + 6 = 14$

If you continue the pattern there would be **14** dots in the next figure.



19. **Hint:** Visualise the grid of tiles as they would appear behind the towel. Count the tiles. OR Count the number of visible tiles and subtract from 42.

**Solution:**



OR 12 tiles are visible.  
 $42 - 12 = 30$

There are **30** tiles covered by the towel.

20. **Hint:** Add all the prices. Break the addition down into smaller parts.

**Solution:** First add the whole dollars.

$$\$3.00 + \$2.00 + \$4.00 + \$1.00 = \$10.00$$

Then add the items with cents in their totals.

$$\$3.65 + \$2.10 = \$5.75$$

Adding these amounts together you get

$$\$10.00 + \$5.75 = \$15.75$$

Ben needs **16** one-dollar coins to buy everything on his list.

21. **Hint:** How many dots along each side of the first triangle? What is the same about the dots on each figure? What is different about the dots on each figure? How do the number of dots change from triangle to triangle? Draw a table of results. Try to draw figure 5.

**Solution:** All figures have 1 dot on the left and 1 dot on the right.

The number of dots on the bottom of each triangle changes as shown.

Figure	Left	Right	Bottom
1	1	1	1
2	1	1	2
3	1	1	3
4	1	1	4
5	1	1	?

Following this idea there would be 5 dots on the bottom of figure 5.

Figure 5 would look like this:

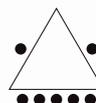


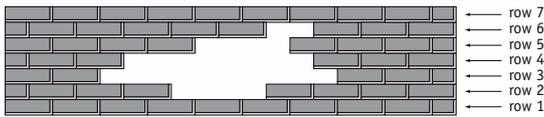
fig. 5

Adding the number of dots in figure 5 you get  
 $1 + 1 + 5 = 7$

If you continue the pattern there would be **7** dots in the next figure.

19. **Hint:** Count the number of full bricks still standing on each row. OR Draw the missing bricks.

**Solution:** There are 9 full bricks on every row.



No bricks have fallen from rows 1 and 7.

Row 2: 7 full bricks standing  $\Rightarrow 9 - 7 = 2$  bricks fallen

Row 3: 4 full bricks standing  $\Rightarrow 9 - 4 = 5$  bricks fallen

Row 4: 5 full bricks standing  $\Rightarrow 9 - 5 = 4$  bricks fallen

Row 5: 7 full bricks standing  $\Rightarrow 9 - 7 = 2$  bricks fallen

Row 6: 8 full bricks standing  $\Rightarrow 9 - 8 = 1$  brick fallen

TOTAL = 14 bricks fallen

OR Drawing a diagram.



14 bricks have fallen from the middle of this wall.

20. **Hint:** What is the cost for each family for each night?

**Solution:** If the total cost for 2 nights is \$400, then the cost for each night is half of \$400:

$$\$400 \div 2 = \$200$$

Two families share this cost, so the cost for each family for each night is half of \$200:

$$\$200 \div 2 = \$100$$

A family of 4 people share this cost, so the cost for each person for each night is a quarter of \$100:

$$\$100 \div 4 = \$25$$

The cost for each person for each night is \$25.

21. **Hint:** How many dots along each side of the first diamond? What is the same about the dots on each figure? What is different about the dots on each figure? How do the number of dots change from diamond to diamond? Draw a table of results. Try to draw figure 5.

**Solution:** All figures have 1 dot on the top left and 1 dot on the top right.

The number of dots on the bottom left and bottom right of each diamond changes as shown.

Figure	Top Left	Top Right	Bottom Left	Bottom Right
1	1	1	1	2
2	1	1	2	3
3	1	1	3	4
4	1	1	4	5
5	1	1	?	?

Following this idea there would be 5 dots on the bottom left and 6 dots on the bottom right of figure 5.

Figure 5 would look like this:



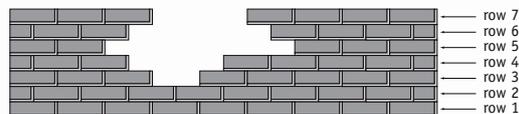
Adding the number of dots in figure 5 you get  $1 + 1 + 5 + 6 = 13$

If you continue the pattern there would be 13 dots in the next figure.

3.8

19. **Hint:** Count the number of full bricks still standing on each row. OR Draw the missing bricks.

**Solution:** There are 9 full bricks on rows 1, 3, 5, and 7. There are 8 full bricks on rows 2, 4, and 6.



No bricks have fallen from rows 1 and 2.

Row 3: 8 full bricks standing  $\Rightarrow 9 - 8 = 1$  brick fallen

Row 4: 6 full bricks standing  $\Rightarrow 8 - 6 = 2$  bricks fallen

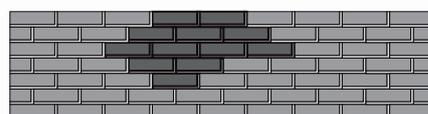
Row 5: 5 full bricks standing  $\Rightarrow 9 - 5 = 4$  bricks fallen

Row 6: 5 full bricks standing  $\Rightarrow 8 - 5 = 3$  bricks fallen

Row 7: 7 full bricks standing  $\Rightarrow 9 - 7 = 2$  bricks fallen

TOTAL = 12 bricks fallen

OR Drawing a diagram.



12 bricks have fallen from the middle of this wall.

**3.8 (cont.)**

**20. Hint:** Find the cost of 2 re-strings, 3 re-strings, etc.

**Solution:** We know 1 re-string costs Flavia \$30.

So every re-string after that costs another \$30.

This means:

1 re-string costs \$30

2 re-strings cost \$60

3 re-strings cost \$90

4 re-strings cost \$120

5 re-strings cost \$150

6 re-strings cost \$180

Flavia spends **\$180** fixing her racquet each year.

**21. Hint:** How many dots along each side of the first rectangle? What is the same about the dots on each figure? What is different about the dots on each figure?

How do the number of dots change from rectangle to rectangle? Draw a table of results. Try to draw figure 4.

**Solution:** All figures have 1 dot on the left, 1 dot on the right and 1 dot on the top.

The number of dots on the bottom of each rectangle changes as shown.

Figure	Left	Right	Top	Bottom
1	1	1	1	2
2	1	1	1	4
3	1	1	1	6
4	1	1	1	?

Following this idea there would be 8 dots on the bottom of figure 4.

Figure 4 would look like this:

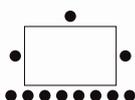


fig. 4

Adding the number of dots in figure 4 you get

$$1 + 1 + 1 + 8 = 11$$

If you continue the pattern there would be **11** dots in the next figure.

**4.1**

**19. Hint:** Which pairs of numbers add to 15? Make a list. Think about the difference between the 2 numbers as you make this list.

**Solution:**

$$15 + 0 = 15 \quad \text{difference} = 15$$

$$14 + 1 = 15 \quad \text{difference} = 13$$

$$13 + 2 = 15 \quad \text{difference} = 11$$

$$12 + 3 = 15 \quad \text{difference} = 9$$

$$11 + 4 = 15 \quad \text{difference} = 7$$

$$10 + 5 = 15 \quad \text{difference} = 5$$

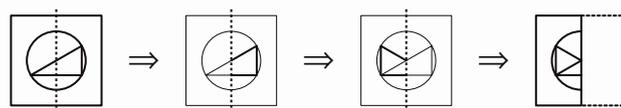
$$9 + 6 = 15 \quad \text{difference} = 3$$

$$8 + 7 = 15 \quad \text{difference} = 1$$

The two numbers are **6** and **9**.

**20. Hint:** Visualise the shape folded in half. Consider what happens to the outer square and the inner circle first. Then try to draw the reflection of just the right half of the triangle as it would look on the left.

**Solution:** The right half of the triangle reflected to the left would look like this:



Options B and C are not possible.

The image that will appear after folding is **A**.

**21. Hint:** Start with the units. Use trial and error.

**Solution:**

*Units*

Ask yourself: What number and 1 add together to make 6?

$$? + 1 = 6$$

$$5 + 1 = 6$$

Write in the 5.

*Tens*

Ask yourself: What number added to 6 makes 9?

$$6 + ? = 9$$

$$6 + 3 = 9$$

Write in the 3.

Check the sum.

The missing digits are:

$$\begin{array}{r} 6 \quad \boxed{5} \\ + \quad \boxed{3} \quad 1 \\ \hline 9 \quad 6 \end{array}$$

19. **Hint:** Which pairs of numbers add to 17? Make a list. Think about the difference between the 2 numbers as you make this list.

**Solution:**

$$\begin{aligned}
 17 + 0 &= 17 & \text{difference} &= 17 \\
 16 + 1 &= 17 & \text{difference} &= 15 \\
 15 + 2 &= 17 & \text{difference} &= 13 \\
 14 + 3 &= 17 & \text{difference} &= 11 \\
 13 + 4 &= 17 & \text{difference} &= 9 \\
 12 + 5 &= 17 & \text{difference} &= 7 \\
 11 + 6 &= 17 & \text{difference} &= 5 \\
 10 + 7 &= 17 & \text{difference} &= 3 \\
 9 + 8 &= 17 & \text{difference} &= 1
 \end{aligned}$$

The two numbers are **6** and **11**.



19. **Hint:** Which pairs of numbers add to 21? Make a list. Think about the result of multiplying the smaller number by 2 as you make this list.

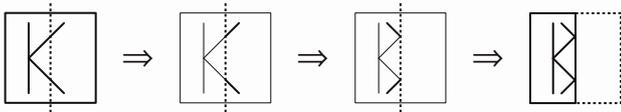
**Solution:**

$$\begin{aligned}
 21 + 0 &= 21 & (2 \times 0 &= 0) \\
 20 + 1 &= 21 & (2 \times 1 &= 2) \\
 19 + 2 &= 21 & (2 \times 2 &= 4) \\
 18 + 3 &= 21 & (2 \times 3 &= 6) \\
 17 + 4 &= 21 & (2 \times 4 &= 8) \\
 16 + 5 &= 21 & (2 \times 5 &= 10) \\
 15 + 6 &= 21 & (2 \times 6 &= 12) \\
 14 + 7 &= 21 & (2 \times 7 &= 14)
 \end{aligned}$$

The two numbers are **7** and **14**.

20. **Hint:** Visualise the shape folded in half. Try to draw the reflection of just the right half of the 'K' as it would look on the left.

**Solution:** The right half of the 'K' reflected to the left would look like this:

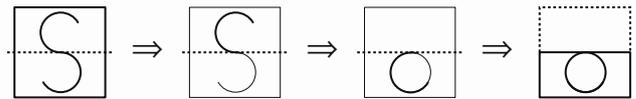


Options A and B are not possible.

The image that will appear after folding is **C**.

20. **Hint:** Visualise the shape folded in half. Try to draw the reflection of just the top half of the 'S' as it would look on the bottom.

**Solution:** The top half of the 'S' reflected to the bottom would look like this:



Options A and B are not possible.

The image that will appear after folding is **C**.

21. **Hint:** Start with the units. Use trial and error.

**Solution:**

*Units* Ask yourself: 9 take away 6 makes what number?  
 $9 - 6 = ?$   
 $9 - 6 = 3$   
 Write in the 3.

*Tens* Ask yourself: What number, take away 5 makes 1?  
 $? - 5 = 1$   
 $6 - 5 = 1$   
 Write in the 6.

Check the subtraction.  
 The missing digits are:

$$\begin{array}{r}
 \boxed{6} \ 9 \\
 - \ 5 \ 6 \\
 \hline
 1 \ \boxed{3}
 \end{array}$$

21. **Hint:** Start with the units. Use trial and error.

**Solution:**

*Units* Ask yourself: What number, take away 4 makes 4?  
 $? - 4 = 4$   
 $8 - 4 = 4$   
 Write in the 8.

*Tens* Ask yourself: 5 take away 2 makes what number?  
 $5 - 2 = ?$   
 $5 - 2 = 3$   
 Write in the 3.

Check the subtraction.  
 The missing digits are:

$$\begin{array}{r}
 5 \ \boxed{8} \\
 - \ 2 \ 4 \\
 \hline
 \boxed{3} \ 4
 \end{array}$$

19. **Hint:** Which pairs of numbers add to 27? Make a list. Think about the result of multiplying the smaller number by 2 as you make this list.

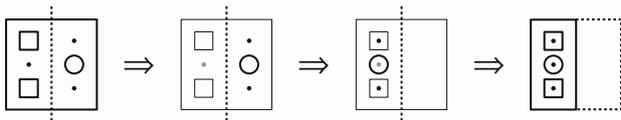
**Solution:**

$$\begin{aligned} 27 + 0 &= 27 & (2 \times 0 &= 0) \\ 26 + 1 &= 27 & (2 \times 1 &= 2) \\ 25 + 2 &= 27 & (2 \times 2 &= 4) \\ 24 + 3 &= 27 & (2 \times 3 &= 6) \\ 23 + 4 &= 27 & (2 \times 4 &= 8) \\ 22 + 5 &= 27 & (2 \times 5 &= 10) \\ 21 + 6 &= 27 & (2 \times 6 &= 12) \\ 20 + 7 &= 27 & (2 \times 7 &= 14) \\ 19 + 8 &= 27 & (2 \times 8 &= 16) \\ 18 + 9 &= 27 & (2 \times 9 &= 18) \end{aligned}$$

The two numbers are **9** and **18**.

20. **Hint:** Visualise the shape folded in half. Try to draw the reflection of just the dots and circle in the right half of the square as they would look on the left.

**Solution:** The right half of the dots and circle reflected to the left would look like this:



Options A and C are not possible.

The image that will appear after folding is **B**.

21. **Hint:** Start with the units. Use trial and error.

**Solution:**

*Units* Ask yourself: What number and 6 add together to make 8?

$$? + 6 = 8$$

$$2 + 6 = 8$$

Write in the 2.

*Tens* Ask yourself: What number and 1 add together to make 7?

$$? + 1 = 7$$

$$6 + 1 = 7$$

Write in the 6.

Check the sum.

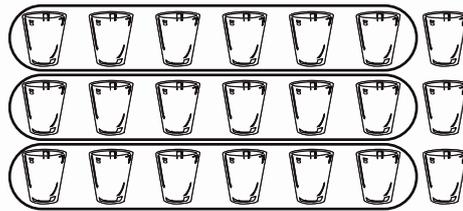
The missing digits are:

$$\begin{array}{r} \boxed{6} \boxed{2} \\ + \quad 1 \quad 6 \\ \hline 7 \quad 8 \end{array}$$



19. **Hint:** Circle the glasses by 6s.

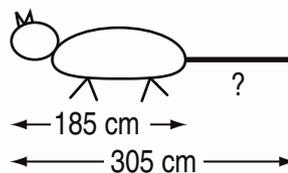
**Solution:**



When Julie counted by 6s there were **3** glasses left over.

20. **Hint:** Draw a diagram.

**Solution:** A diagram of what we are given would look like this:



The difference between 305 cm and 185 cm is the length of the tail.

$$305 - 185 = 120 \text{ cm}$$

The tail is **120** cm long.

21. **Hint:** Think of a simpler question first. What is the difference between  $1 \times 5$  and  $2 \times 5$ ? Then use the given multiplication fact. OR Consider the difference between the two larger factors.

**Solution:** When calculating  $2 \times 5$  you simply add 5 to the result of  $1 \times 5 = 5$

$$2 \times 5 = 5 + 5 = 10$$

When calculating  $3 \times 5$  you simply add 5 to the result of  $2 \times 5 = 10$ , and so on.

$$3 \times 5 = 10 + 5 = 15$$

Similarly, if  $20 \times 5 = 100$ , to calculate  $21 \times 5$  simply add 5 to 100.

$$\text{So } 21 \times 5 = 100 + 5 = 105$$

Then if  $21 \times 5 = 105$ , to calculate  $22 \times 5$  simply add 5 to 105.

$$105 + 5 = 110$$

OR The difference between 20 and 22 is 2.

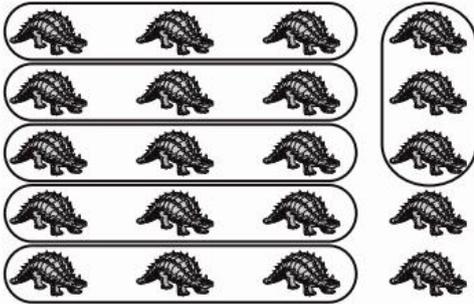
So  $2 \times 5 = 10$  is the difference between the results.

$$100 + 10 = 110$$

So  $22 \times 5 = \mathbf{110}$

19. **Hint:** Circle the dinosaurs by 3s.

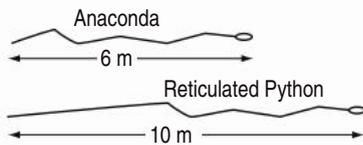
**Solution:**



When Joanna counted by 3s there were **2** dinosaurs left over.

20. **Hint:** Draw a diagram.

**Solution:** A diagram of what we are given would look like this:



The difference between the Reticulated Python and the Anaconda is

$$10 - 6 = 4 \text{ m.}$$

The prefix 'centi' means one hundredth.

One centimetre (cm) = one hundredth of a metre (m).

Therefore one metre is 100 times more than a centimetre.

Converting metres to centimetres multiply by 100.

$$4 \times 100 = 400 \text{ cm}$$

The Python is **400** cm longer than the Anaconda.

21. **Hint:** Think of a simpler question first. What is the difference between  $1 \times 3$  and  $2 \times 3$ ? Then use the given multiplication fact. OR Consider the difference between the two larger factors.

**Solution:** When calculating  $2 \times 3$  you simply add 3 to the result of  $1 \times 3 = 3$

$$2 \times 3 = 3 + 3 = 6$$

When calculating  $3 \times 3$  you simply add 3 to the result of  $2 \times 3 = 6$ , and so on.

$$3 \times 3 = 6 + 3 = 9$$

Similarly, if  $30 \times 3 = 90$ , to calculate  $31 \times 3$  simply add 3 to 90.

$$\text{So } 31 \times 3 = 90 + 3 = 93$$

Then if  $31 \times 3 = 93$ , to calculate  $32 \times 3$  simply add 3 to 93.

$$93 + 3 = 96$$

Finally if  $32 \times 3 = 96$ , to calculate  $33 \times 3$  simply add 3 to 96.

$$96 + 3 = 99$$

OR The difference between 30 and 33 is 3.

So  $3 \times 3 = 9$  is the difference between the results.

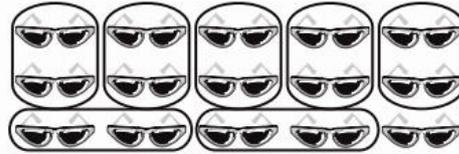
$$90 + 9 = 99$$

$$\text{So } 33 \times 3 = \mathbf{99}$$



19. **Hint:** Circle the sunglasses by 2s.

**Solution:**



When David counted by 2s there was **1** pair of sunglasses left over.

20. **Hint:** Consider how many days in a week. Find how many kilometres Gillian travels in 1 week.

**Solution:** We know Gillian travels 4 km in 1 day. There are 7 days in 1 week.

This means:

$$1 \text{ day} - 4 \text{ km}$$

$$2 \text{ days} - 8 \text{ km}$$

$$3 \text{ days} - 12 \text{ km}$$

$$4 \text{ days} - 16 \text{ km}$$

$$5 \text{ days} - 20 \text{ km}$$

$$6 \text{ days} - 24 \text{ km}$$

$$7 \text{ days} - 28 \text{ km}$$

$$\text{or } 7 \times 4 \text{ km} = 28 \text{ km}$$

Gillian travels 28 km in a week.

In 2 weeks Gillian travels  $2 \times 28 \text{ km} = 56 \text{ km}$

Gillian travels **56** km in 2 weeks.

21. **Hint:** Think of a simpler question first. What is the difference between  $1 \times 4$  and  $2 \times 4$ ? Then use the given multiplication fact. OR Consider the difference between the two larger factors.

**Solution:** When calculating  $2 \times 4$  you simply add 4 to the result of  $1 \times 4 = 4$

$$2 \times 4 = 4 + 4 = 8$$

When calculating  $3 \times 4$  you simply add 4 to the result of  $2 \times 4 = 8$ , and so on.

$$3 \times 4 = 8 + 4 = 12$$

Similarly, if  $50 \times 4 = 200$ , to calculate  $51 \times 4$  simply add 4 to 200.

$$\text{So } 51 \times 4 = 200 + 4 = 204$$

Then if  $51 \times 4 = 204$ , to calculate  $52 \times 4$  simply add 4 to 204.

$$204 + 4 = 208$$

OR The difference between 50 and 52 is 2.

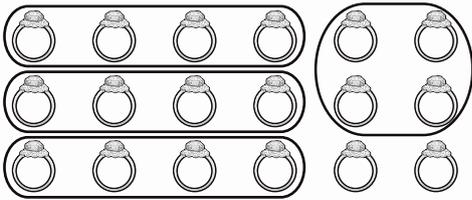
So  $2 \times 4 = 8$  is the difference between the results.

$$200 + 8 = 208$$

$$\text{So } 52 \times 4 = \mathbf{208}$$

19. **Hint:** Circle the rings by 4s.

**Solution:**



When Val counted by 4s there were **2** rings left over.

20. **Hint:** Draw a time line. Write down what you know about the temperature increase.

**Solution:**

6:00 am	?	°C
7:00 am	) +1°C	
8:00 am	) +2°C	
9:00 am	) +2°C	
10:00 am	) +2°C	
11:00 am	) +2°C	
12:00 pm	) +2°C	
1:00 pm	) +2°C	28°C

Working backwards from 1:00 pm:

1:00 pm	28°C
12:00 pm	) -2°C 26°C
11:00 am	) -2°C 24°C
10:00 am	) -2°C 22°C
9:00 am	) -2°C 20°C
8:00 am	) -2°C 18°C
7:00 am	) -2°C 16°C
6:00 am	) -1°C 15°C

At 6:00 am the temperature was **15°C**.

21. **Hint:** Think of a simpler question first. What is the difference between  $1 \times 6$  and  $2 \times 6$ ? Then use the given multiplication fact. OR Consider the difference between the two larger factors.

**Solution:** When calculating  $2 \times 6$  you simply add 6 to the result of  $1 \times 6 = 6$

$$2 \times 6 = 6 + 6 = 12$$

When calculating  $3 \times 6$  you simply add 6 to the result of  $2 \times 6 = 12$ , and so on.

$$3 \times 6 = 12 + 6 = 18$$

Similarly, if  $20 \times 6 = 120$ , to calculate  $21 \times 6$  simply add 6 to 120.

$$\text{So } 21 \times 6 = 120 + 6 = 126$$

Then if  $21 \times 6 = 126$ , to calculate  $22 \times 6$  simply add 6 to 126.

$$126 + 6 = 132$$

OR The difference between 20 and 22 is 2.

So  $2 \times 6 = 12$  is the difference between the results.

$$120 + 12 = 132$$

$$\text{So } 22 \times 6 = \mathbf{132}$$

# MATHS MATE



## Teacher Resource



### **Teacher's Guide to the Use of Maths Mate**

pages i - viii



### **Student Workbook Answers**

pages 3 - 72



### **Student Workbook Short Answers**

pages 1 - 8



### **Problem Solving Hints & Solutions**

pages 1 - 19



### **Test Masters**

pages 1 - 32



### **Test Answers**

pages 1 - 32



### **Record Keeping Sheets**

pages 1 - 10





Name: .....

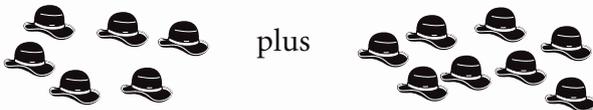
1. [Counting]

How many candles are there?




2. [Addition / Subtraction]

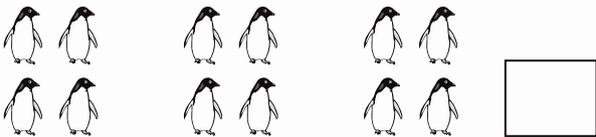
Complete the addition.



$$\square + \square = \square$$

3. [Multiplication / Division]

How many groups of 4 penguins?




4. [+ Whole Numbers]

The sum of 9 and 5 equals

5. [- Whole Numbers]

21 take away 5 equals

6. [× Whole Numbers]

6 times 3 is

7. [÷ Whole Numbers]

How many 2s in 16?

8. [Word Problems]

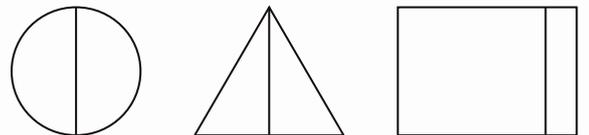
The annual average maximum temperature in China is 13°C and in Australia is 15°C higher. What is the annual average maximum temperature in Australia?

[Write the number sentence.]

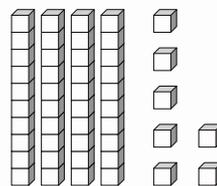
 =  °C

9. [Fractions]

Circle the pictures that show halves.



10. [Place Value]



$$\square \text{ tens } \square \text{ ones} = \square$$

11. [Word Numbers]

Write in numerals:

fifty-two

12. [Money]  
Circle the coin with the smallest value.



13. [Number Patterns]  
5, 7, 9, 11, 13, ,

14. [Time]  
Yesterday was Thursday. What day is today?

15. [Measuring]  
Which Christmas tree is the shortest?  
A) B) C)

16. [Shapes]  
Circle the cube.

17. [Location]  
Is most of the rubbish 'inside' or 'outside' the bin?

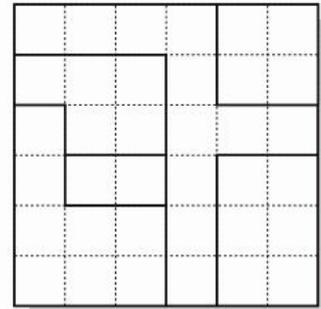
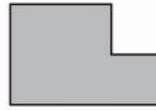
18. [Statistics / Probability]  
How many toes does a giraffe have on each foot?

Hoofed animals - Number of toes on a foot

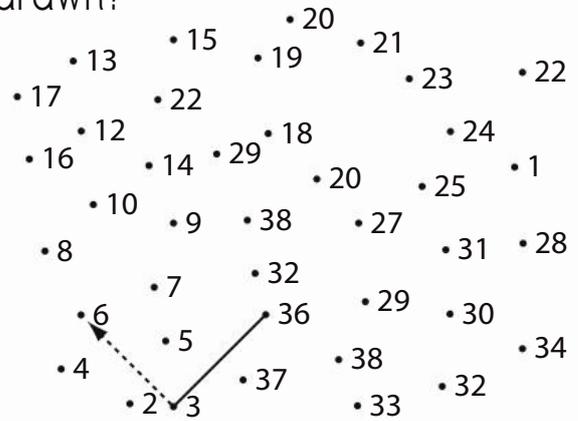
donkey	giraffe	antelope	sloth

Key: = 1 toe

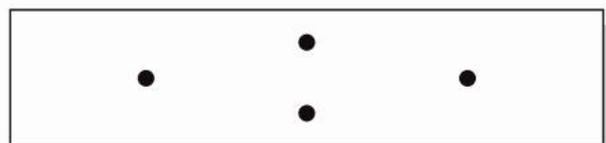
19. [Problem Solving 1]  
Find and colour this shape inside the grid.



20. [Problem Solving 2]  
Start at 3. Connect the dots by counting by 3s. What have you drawn?




21. [Problem Solving 3]  
Draw 2 straight lines to separate the dots so that one dot is in each area. [Hint: A ruler may help.]

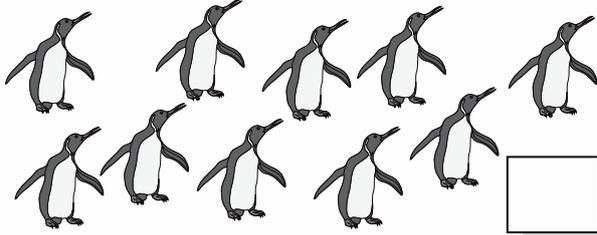




Name: .....

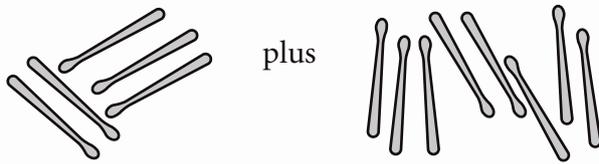
1. [Counting]

How many penguins are there?



2. [Addition / Subtraction]

Complete the addition.



$$\square + \square = \square$$

3. [Multiplication / Division]

How many groups of 4 hearts?



4. [+ Whole Numbers]

The sum of 8 and 4 equals

5. [- Whole Numbers]

27 take away 9 equals

6. [× Whole Numbers]

7 times 2 is

7. [÷ Whole Numbers]

How many 3s in 27?

8. [Word Problems]

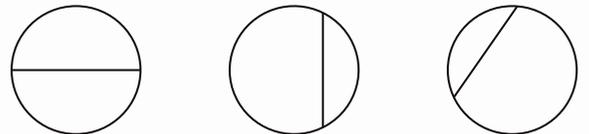
The annual average maximum temperature in Germany is 12°C and in Niger is 23°C higher. What is the annual average maximum temperature in Niger?

[Write the number sentence.]

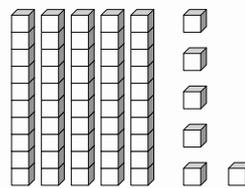
 =  °C

9. [Fractions]

Circle the picture that shows halves.



10. [Place Value]



$$\square \text{ tens } \square \text{ ones} = \square$$

11. [Word Numbers]

Write in numerals:  
sixty-five

12. [Money]  
Circle the coin with the smallest value.



13. [Number Patterns]  
6, 8, 10, 12, 14,  ,

14. [Time]  
Yesterday was Friday. What day is today?

15. [Measuring]  
Which musical instrument is the shortest?
- A) 
- B) 
- C) 

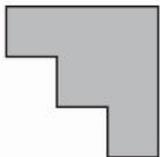
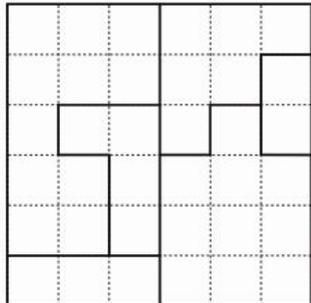
16. [Shapes]  
Circle the cone.
- 

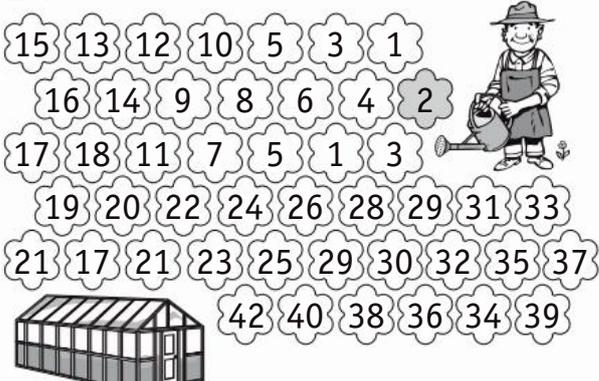
17. [Location]  
Is the sponge 'inside' or 'outside' the bucket?
- 
- 

18. [Statistics / Probability]  
How much is the bunch of celery?

**Cost of groceries**

	\$		
	\$		
\$	\$	\$	\$
\$	\$	\$	\$
			
Each \$ = 1 dollar		dollars	

19. [Problem Solving 1]  
Find and colour this shape inside the grid.
- 
- 

20. [Problem Solving 2]  
Start at 2. Colour the flower path to the greenhouse by counting by 2s.
- 

21. [Problem Solving 3]  
Draw 2 straight lines to separate the dots so that one dot is in each area. [Hint: A ruler may help.]
- 



Name: .....

1. [Counting]

Count on from 357.

357				
-----	--	--	--	--

2. [Addition / Subtraction]

Circle the numbers that make 10, then add.

$$7 + 6 + 3 = \square$$

3. [Multiplication / Division]

Circle to make 3 equal groups.



$$9 \text{ divided into } 3 \text{ groups} = \square$$

4. [+ Whole Numbers]

	5	6	2	9	4
+ 5					

5. [- Whole Numbers]

	10	6	13	9	8
- 4					

6. [× Whole Numbers]

	7	3	5	9	6
× 2					

7. [÷ Whole Numbers]

$$60 \div 10 = \square$$

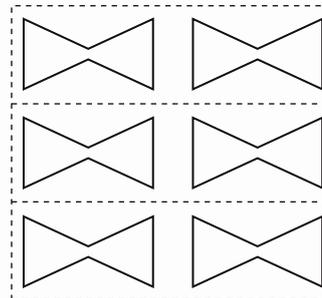
8. [Word Problems]

In 2020, the tallest man in the world was 251 cm tall. The tallest New Zealander, Ron Bax, was 225 cm tall. How many centimetres shorter was Ron Bax? [Write the number sentence.]

	=	cm
--	---	----

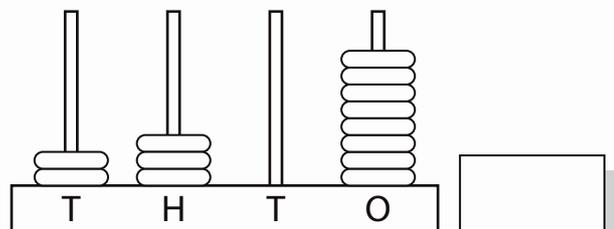
9. [Fractions]

Colour one third of the bows.



10. [Place Value]

Write the numeral.

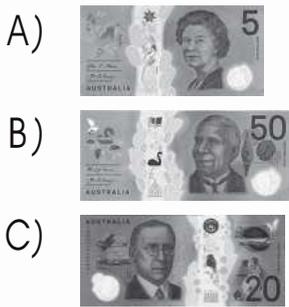


11. [Word Numbers]

Write the number 69 in words.

--

12. [Money]  
Which note has the greatest value?




13. [Number Patterns]

14, 12, 10, 8, 6, ,

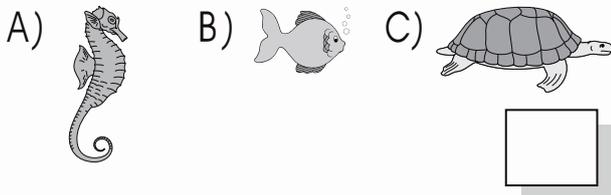
14. [Time]

Which day of the week is Saint Patrick's Day in 2021?

MARCH - 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

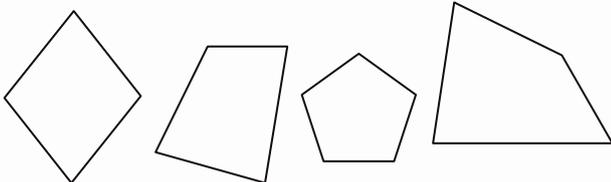
15. [Measuring]

Which animal is likely to weigh the most?




16. [Shapes]

Circle the shape that does not belong.



17. [Location]

Looking at the faces, who is to the right of Sad?




18. [Statistics / Probability]

Use tally marks (|) to show the number 7.

19. [Problem Solving 1]

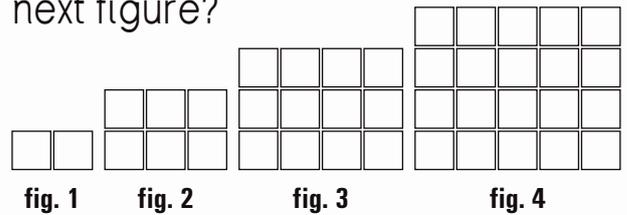
You have \$5. You buy two chocolates. How much change do you receive?



\$

20. [Problem Solving 2]

If you continue the pattern, how many squares would be in the next figure?




21. [Problem Solving 3]

To order a sandwich, you may choose one bread and one meat. How many different sandwiches can be ordered?

**COOK'S FIX**

**BREADS:** white, rye

**MEATS:** roast beef, chicken, ham





Name: .....

1. [Counting]

Count on from 547.

547				
-----	--	--	--	--

2. [Addition / Subtraction]

Circle the numbers that make 10, then add.

$$7 + 8 + 2 = \square$$

3. [Multiplication / Division]

Circle to make 5 equal groups.



$$10 \text{ divided into } 5 \text{ groups} = \square$$

4. [+ Whole Numbers]

	0	8	4	7	6
+ 5					

5. [- Whole Numbers]

	9	13	11	7	4
- 4					

6. [× Whole Numbers]

	3	9	4	8	7
× 2					

7. [÷ Whole Numbers]

$$30 \div 10 = \square$$

8. [Word Problems]

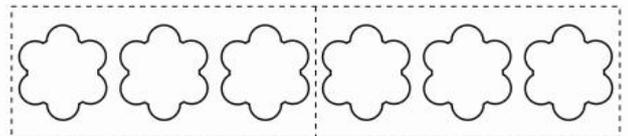
In 2020, the tallest man in the world was 251 cm tall. The tallest American, Igor Vovkovinskiy, was 235 cm tall. How many centimetres shorter was Igor Vovkovinskiy?

[Write the number sentence.]

	=	cm
--	---	----

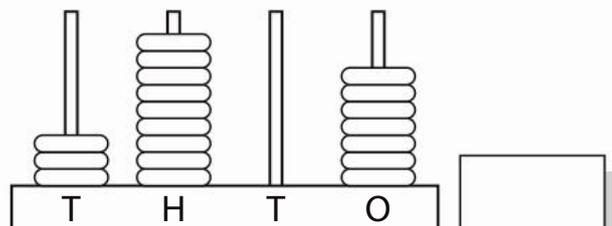
9. [Fractions]

Colour one half of the flowers.



10. [Place Value]

Write the numeral.



11. [Word Numbers]

Write the number 73 in words.

--





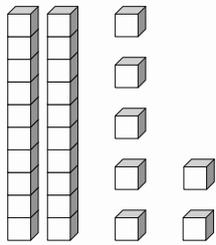
Name: .....

1. [Counting]

Use the bells to show counting by 3s.

2. [Addition / Subtraction]

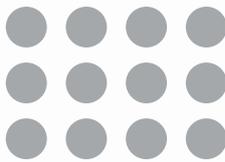
Complete the subtraction.



$27 - 11 = \square$

3. [Multiplication / Division]

Complete the multiplication.



3 rows of 4 =

$3 \times 4 = \square$

4. [+ Whole Numbers]

	4	8	7	13	2
+ 6					

6. [× Whole Numbers]

	6	4	8	3	9
× 3					

7. [÷ Whole Numbers]

$45 \div 5 = \square$

8. [Word Problems]

How many legs do 8 ducks have?  
[Write the number sentence.]

	=
--	---

9. [Fractions]

Draw a line to divide the snowman into halves.



10. [Place Value]

Expand 479.

hundreds	tens	ones
----------	------	------

5. [- Whole Numbers]

$47 - 11 = \square$

11. [Word Numbers]

Write in numerals:

thirty

12. [Money]  
How much money in total?



\$

13. [Number Patterns]

40, 50, 60, 70, ,

14. [Time]

How many days in October?

15. [Measuring]

Which object is about 1 metre high?

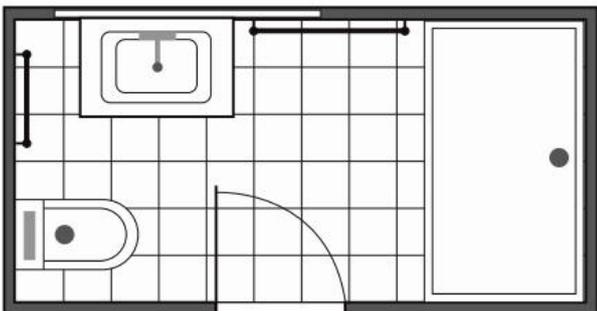
- A) front door
- B) kitchen bench
- C) computer

16. [Shapes]

How many faces does a rectangular prism have?

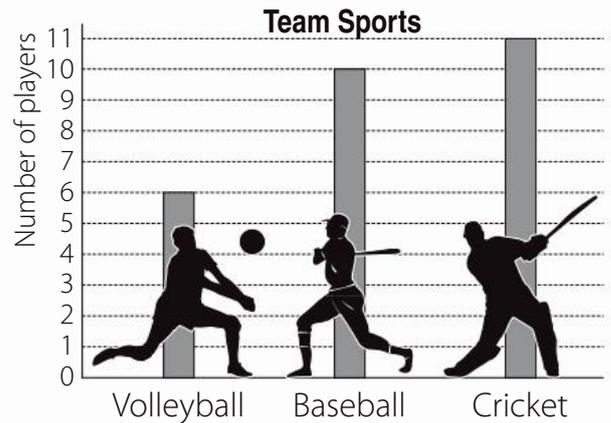
17. [Location]

Circle the towel rail which is on the opposite wall to the door.



18. [Statistics / Probability]

Which team sport has 10 players?



19. [Problem Solving 1]

Sue skip counted, starting at 31, until she reached 39. Could she be counting by threes?

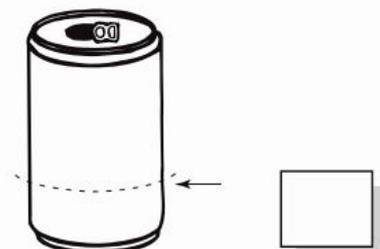
20. [Problem Solving 2]

What number am I?  
I am less than 20.  
I am odd.  
You say me when you count by 3s and 5s.

21. [Problem Solving 3]

This can holds 300 millilitres (mL). The arrow shows how much soft drink is in the can. About how much soft drink is in the can?

- A) 100 mL
- B) 200 mL
- C) 300 mL





Name: .....

1. [Counting]

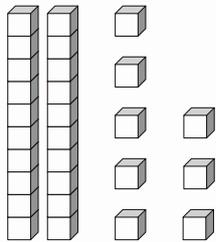
Use the hearts to show counting by 5s.



5					
---	--	--	--	--	--

2. [Addition / Subtraction]

Complete the subtraction.



$$28 - 13 = \square$$

3. [Multiplication / Division]

Complete the multiplication.



2 rows of 8 =

$$2 \times 8 = \square$$

4. [+ Whole Numbers]

	17	4	3	6	9
+ 6					

5. [- Whole Numbers]

$$35 - 12 = \square$$

6. [× Whole Numbers]

	2	1	7	5	10
× 3					

7. [÷ Whole Numbers]

$$18 \div 3 = \square$$

8. [Word Problems]

How many legs do 9 cats have?  
[Write the number sentence.]

	=
--	---

9. [Fractions]

Draw a line to divide the pizza cutter into halves.



10. [Place Value]

Expand 324.

hundreds	tens	ones
----------	------	------

11. [Word Numbers]

Write in numerals:

fifty

--

12. [Money]  
How much money in total?



13. [Number Patterns]  
30, 40, 50, 60, ,

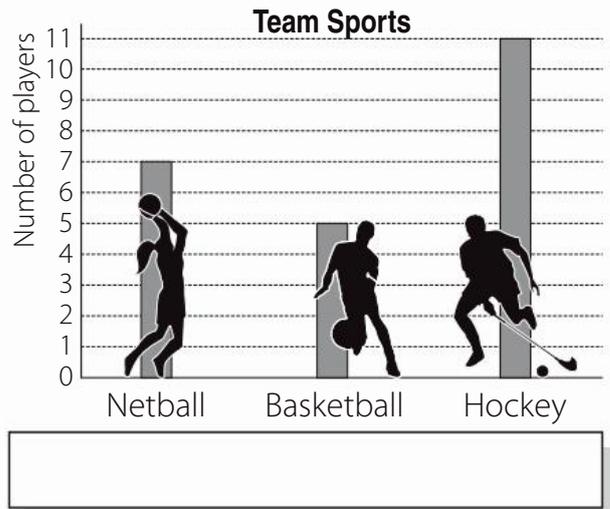
14. [Time]  
How many days in June?

15. [Measuring]  
A shoe weighs:  
A) less than a kilogram  
B) about a kilogram  
C) more than a kilogram

16. [Shapes]  
How many vertices does a cube have?

17. [Location]  
Circle the towel rail which is closest to the door.

18. [Statistics / Probability]  
Which team sport has 5 players?



19. [Problem Solving 1]  
Dan skip counted, starting at 20, until he reached 40. Could he be counting by fives?

20. [Problem Solving 2]  
What number am I?  
I am less than 30.  
I am even.  
You say me when you count by 4s and 5s.

21. [Problem Solving 3]  
This barrel holds 60 litres (L) when filled to the top. The arrow shows how much petrol is in the barrel. About how much petrol is in the barrel?

A) 10 L  
B) 20 L  
C) 30 L



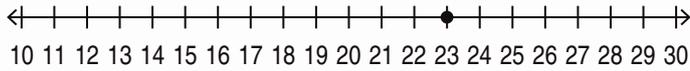
Name: .....

1. [Counting]

Count forwards by 10s.

870				
-----	--	--	--	--

2. [Addition / Subtraction]



$$23 - 5 = \square$$

3. [Multiplication / Division]



$$2 + 2 + 2 + 2 + 2 + 2 = \square$$

$$6 \times 2 = \square$$

4. [+ Whole Numbers]

$$34 + 25 = \square$$

5. [- Whole Numbers]

	8	12	24	15	10
- 7					

6. [× Whole Numbers]

	5	2	9	6	3
× 4					

7. [÷ Whole Numbers]

	15	5	35	20	40
÷ 5					

8. [Word Problems]

There are 32 pieces on the chess board. Half of them are white.

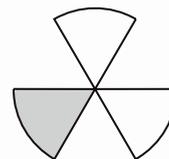
How many pieces are white?

[Write the number sentence.]

	=
--	---

9. [Fractions]

Write a fraction for the shaded part.



--

--

10. [Place Value]

Write the value of each digit.

$$587 = 500 + \square + \square$$

11. [Word Numbers]

Write the number 105 in words.

--

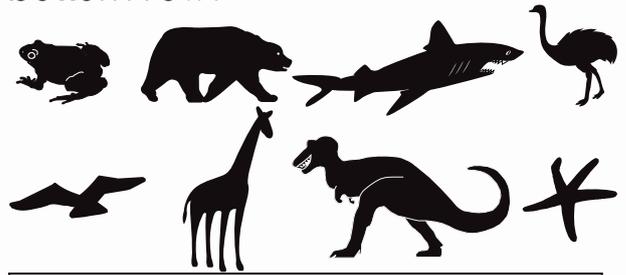
12. [Money]  
Circle the exact money needed to download a song.



\$2.80



17. [Location]  
Which animal is in the third column from the left and on the bottom row?




13. [Number Patterns]  
19, 16, 13, 10, 7, ,

18. [Statistics / Probability]  
Complete the tally table.

**Melbourne - December 2011**

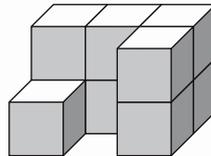
Weather	Tally	Number
days of hail		
days of thunder		4
days of rain		12

14. [Time]  
Use 'to' or 'past' to complete the time.



Twenty  seven.

19. [Problem Solving 1]  
How many cubes in this shape?

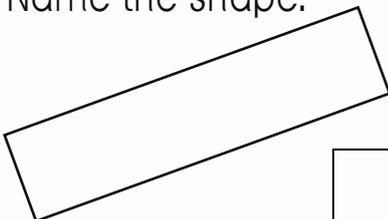



15. [Measuring]  
Which unit is most commonly used to measure the width of a cupboard?

- A) kilometre (km)  
B) millimetre (mm)

20. [Problem Solving 2]  
In how many ways can you make one dollar using just 50 cent coins and 10 cent coins?

16. [Shapes]  
Name the shape.




21. [Problem Solving 3]  
If a marble weighs 40 grams (g), how much does a banana weigh?





Name: .....

1. [Counting]

Count forwards by 10s.

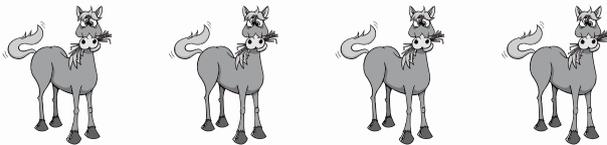
690				
-----	--	--	--	--

2. [Addition / Subtraction]



$$21 - 5 = \square$$

3. [Multiplication / Division]



$$4 + 4 + 4 + 4 = \square$$

$$4 \times 4 = \square$$

4. [+ Whole Numbers]

$$72 + 18 = \square$$

5. [- Whole Numbers]

	17	11	13	20	19
- 7					

6. [× Whole Numbers]

	1	4	10	7	8
× 4					

7. [÷ Whole Numbers]

	25	10	30	45	50
÷ 5					

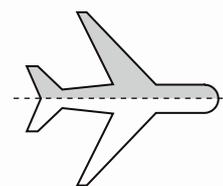
8. [Word Problems]

There are 60 pieces on the Chinese checkers board. The pieces are grouped equally in six different colour sets. How many pieces are in each colour set? [Write the number sentence.]

	=
--	---

9. [Fractions]

Write a fraction for the shaded part.




10. [Place Value]

Write the value of each digit.

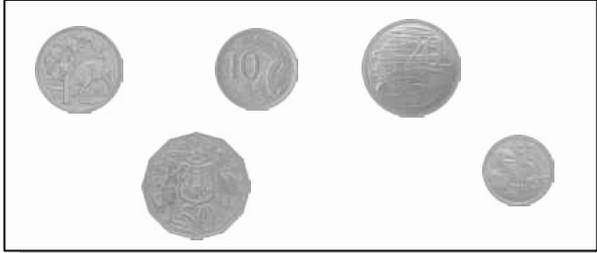
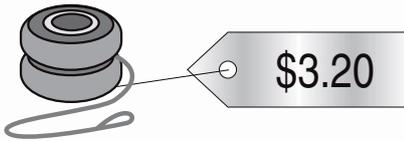
$$327 = 300 + \square + \square$$

11. [Word Numbers]

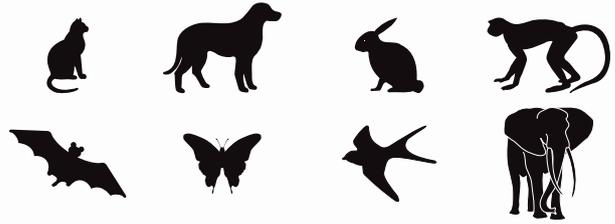
Write the number 701 in words.

--

12. [Money]  
Circle the exact money needed to buy the yoyo.

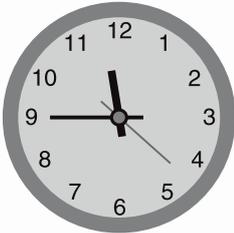


17. [Location]  
Which animal is in the second column from the left and on the bottom row?




13. [Number Patterns]  
20, 17, 14, 11, 8, ,

14. [Time]  
Use 'to' or 'past' to complete the time.



A quarter  twelve.

18. [Statistics / Probability]  
Complete the tally table.

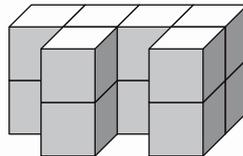
Days of fog - September 2012

City	Tally	Number
New York City	III	
Denver		6
San Jose		4
Miami		13

15. [Measuring]  
Which unit is most commonly used to measure the height of a tree?

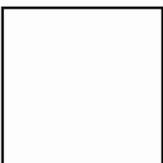
- A) metre (m)   
B) millimetre (mm)

19. [Problem Solving 1]  
How many cubes in this shape?

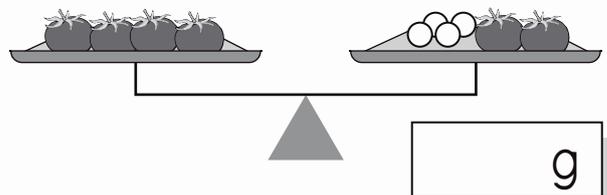



20. [Problem Solving 2]  
In how many ways can you make three dollars using just 50 cent coins and 20 cent coins?

16. [Shapes]  
Name the shape.




21. [Problem Solving 3]  
If a marble weighs 60 grams (g), how much does a tomato weigh?





Name: .....

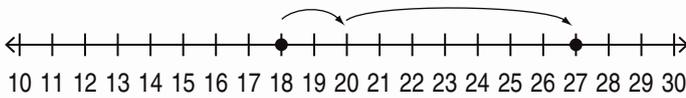
1. [Counting]

Complete the skip counting pattern.

4 8    24 28

2. [Addition / Subtraction]

How much must be added to 18 to make 27?



$$27 - 18 = \boxed{\phantom{00}}$$

3. [Multiplication / Division]

Double this number of kites by first drawing them.



$$\boxed{\phantom{00}} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 327 \\ + 340 \\ \hline \boxed{\phantom{000}} \end{array}$$

5. [- Whole Numbers]

$$\begin{array}{r} 38 \\ - 17 \\ \hline \boxed{\phantom{00}} \end{array}$$

6. [× Whole Numbers]

	3	5	4	6	8
× 6	<input type="text"/>				

7. [÷ Whole Numbers]

	9	15	18	6	27
÷ 3	<input type="text"/>				

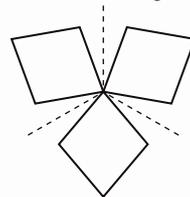
8. [Word Problems]

The pizza took 15 minutes to cook. Then the apple pie went into the oven for 35 minutes. How long did everything take to cook?  
[Write the number sentence.]

$$\boxed{\phantom{000}} = \boxed{\phantom{000}} \text{ min}$$

9. [Fractions]

Colour  $\frac{2}{3}$  of the shape.



10. [Place Value]

What is the value of the underlined digit in 249?

A) 4      B) 40      C) 400

11. [Word Numbers]

Write in numerals:

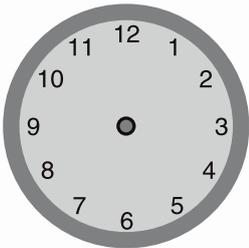
six hundred and fifty-nine

12. [Money]  
You have \$14.50. Which two items can you afford to buy?

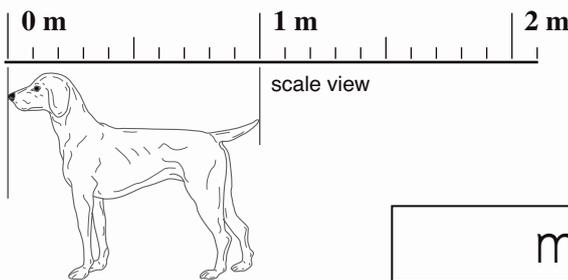
- A)  
  - B)  
  - C)  
- 

13. [Number Patterns]  
2, 7, 12, 17, 22, ,

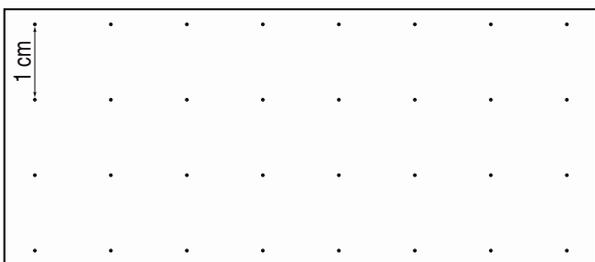
14. [Time]  
Draw hands on the clock to show twenty-five past ten.



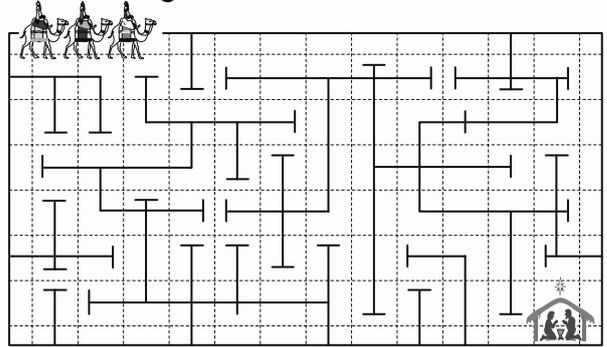
15. [Measuring]  
Use the scale. How long is the dog?



16. [Shapes]  
Draw a square with side lengths of 3 cm on the grid.

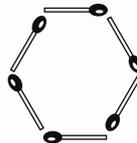


17. [Location]  
Draw a path through the maze so that the three wise men can find the manger.



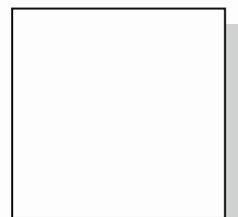
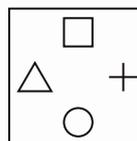
18. [Statistics / Probability]  
What is the chance ...  
"Someone you know wins lotto."  
A) possible   
B) impossible

19. [Problem Solving 1]  
This is a hexagon made out of matches. How many matches in 3 hexagons?



20. [Problem Solving 2]  
A red kangaroo weighs 70 kg. There are 4 kangaroos in the mob. How much does the mob weigh?  kg

21. [Problem Solving 3]  
Redraw this square after it is rotated half a turn.





Name: .....

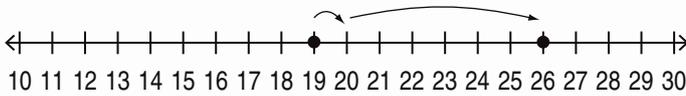
1. [Counting]

Complete the skip counting pattern.

10   40 50

2. [Addition / Subtraction]

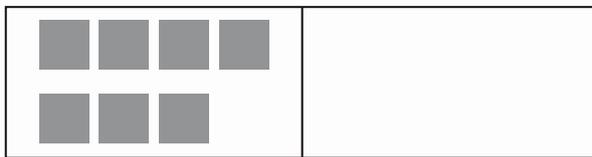
How much must be added to 19 to make 26?



$$26 - 19 = \boxed{\phantom{00}}$$

3. [Multiplication / Division]

Double this number of squares by first drawing them.



$$\boxed{\phantom{00}} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 255 \\ + 612 \\ \hline \end{array}$$

5. [- Whole Numbers]

$$\begin{array}{r} 37 \\ - 15 \\ \hline \end{array}$$

6. [× Whole Numbers]

	2	7	8	3	9
× 6	<input type="text"/>				

7. [÷ Whole Numbers]

	24	21	12	3	30
÷ 3	<input type="text"/>				

8. [Word Problems]

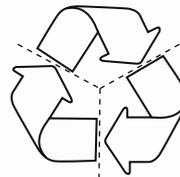
For breakfast Leo ate cereal which had 140 calories of energy. He also ate milk which had 75 calories. How many calories altogether did Leo have for breakfast?

[Write the number sentence.]

$$\boxed{\phantom{00000}} = \boxed{\phantom{00000}}$$

9. [Fractions]

Colour  $\frac{1}{3}$  of the shape.



10. [Place Value]

What is the value of the underlined digit in 684?

A) 6      B) 60      C) 600

11. [Word Numbers]

Write in numerals:  
three hundred and  
seventeen

12. [Money]  
You have \$4. Which two items can you afford to buy?

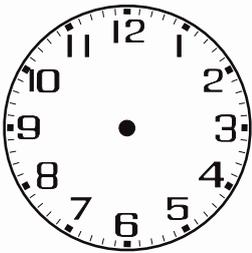
A)  B)  C) 

\$1.90      \$2.05      \$2.95

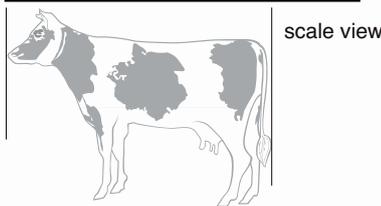
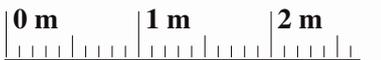
&

13. [Number Patterns]  
3, 8, 13, 18, 23,  ,

14. [Time]  
Draw hands on the clock to show twenty-five to six.

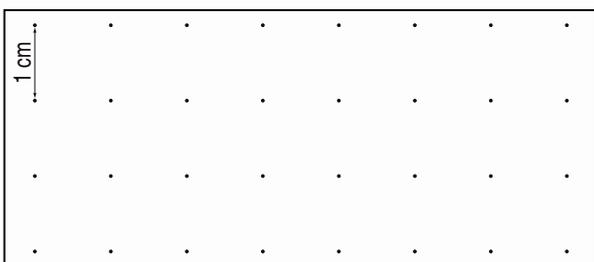


15. [Measuring]  
Use the scale. How long is the cow?

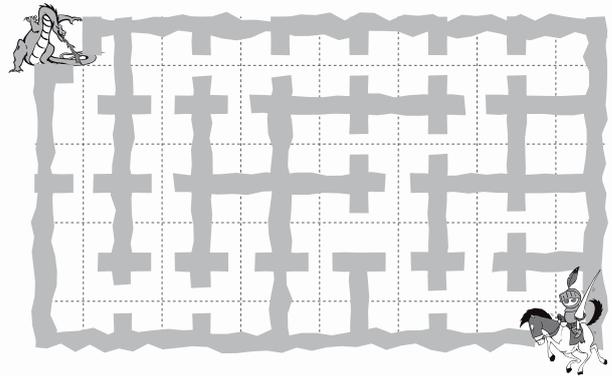


m

16. [Shapes]  
Draw a rectangle with a length of 4 cm and a width of 1 cm on the grid.



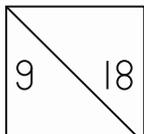
17. [Location]  
Draw a path through the maze so that the knight can reach the dragon.



18. [Statistics / Probability]  
What is the chance ...  
"Your mum will have green skin tomorrow."  
A) possible   
B) impossible

19. [Problem Solving 1]  
This is a pentagon made out of matches. How many matches in 4 pentagons?  


20. [Problem Solving 2]  
Sam replaced 36 car tyres. If he replaced all 4 tyres on each car, how many cars did he fix?

21. [Problem Solving 3]  
Redraw this square after it is rotated a quarter of a turn clockwise.  




Name: .....

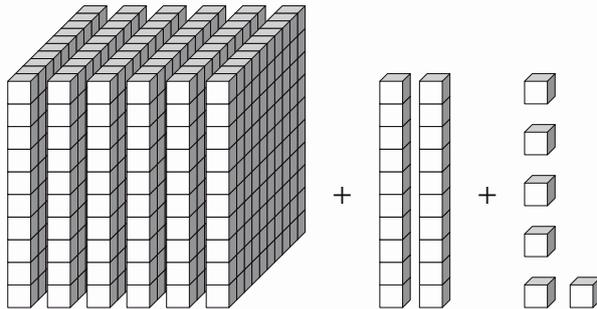
1. [Counting]

Count on by 5s from 640.

640				
-----	--	--	--	--

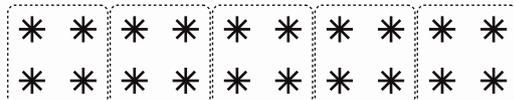
2. [Addition / Subtraction]

Complete the addition.



$$600 + 20 + 6 = \boxed{\phantom{000}}$$

3. [Multiplication / Division]



20 divided into groups of 4 =

$$20 \div 4 = \boxed{\phantom{00}}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 426 \\ + 156 \\ \hline \end{array}$$

5. [- Whole Numbers]

$$\begin{array}{r} 365 \\ - 231 \\ \hline \end{array}$$

6. [ $\times$  Whole Numbers]

$$7 \times 40 = \boxed{\phantom{000}}$$

7. [+ Whole Numbers]

	32	16	20	8	28
$\div 4$					

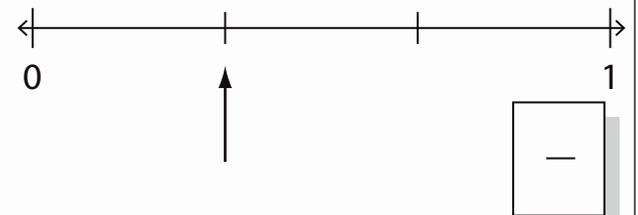
8. [Word Problems]

The average person falls asleep in 7 minutes. It took Isaac 21 minutes to fall asleep. How much longer did it take Isaac to fall asleep than the average person? [Write the number sentence.]

$$\boxed{\phantom{000}} = \text{min}$$

9. [Fractions]

What fraction is shown by the arrow on the number line?



10. [Place Value]

Use greater than ( $>$ ) or less than ( $<$ ) to make this true.

$$322 \boxed{\phantom{<}} 332$$

11. [Word Numbers]

Write the number 231 in words.

--	--	--	--	--	--	--	--	--	--

12. [Money]  
How many 10¢ coins make \$2.00?

13. [Number Patterns]

26, 22, 18, 14, 10, ,

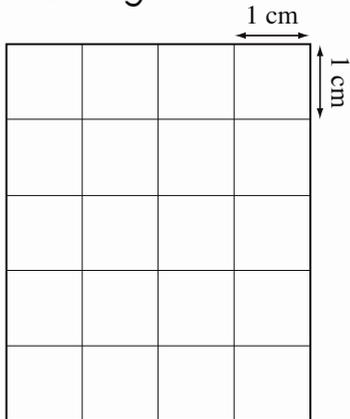
14. [Time]

Which time is quarter past nine?

- A) 9:30
- B) 9:15
- C) 9:00

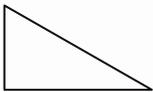
15. [Measuring]

What is the perimeter of the rectangle?



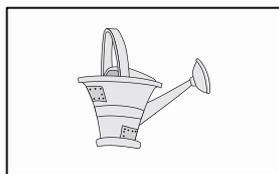
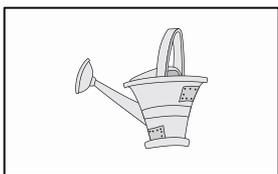

16. [Shapes]

How many sides does a triangle have?




17. [Location]

Has this watering can been moved by a flip, a slide or a turn?




18. [Statistics / Probability]

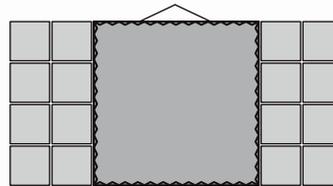
How many eyes does a huntsman spider have? **Spider: number of eyes**

Red-backed spider	Spitting spider	Huntsman spider	Caponiidae spider

Key: = 2 eyes

19. [Problem Solving 1]

A painting is covering some of the 32 square tiles on a wall. How many tiles are covered by the painting?




20. [Problem Solving 2]

Ella makes 15 hats a day, working 5 days a week. The cost of making 1 hat is \$10. The hats sell for \$30 each. How much money per week does Ella earn in total, if she sells all the hats?

21. [Problem Solving 3]

If you continue the pattern, how many dots would be in the next figure?

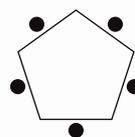


fig. 1

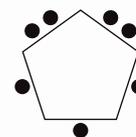


fig. 2

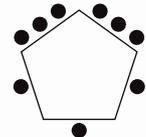


fig. 3



Name: .....

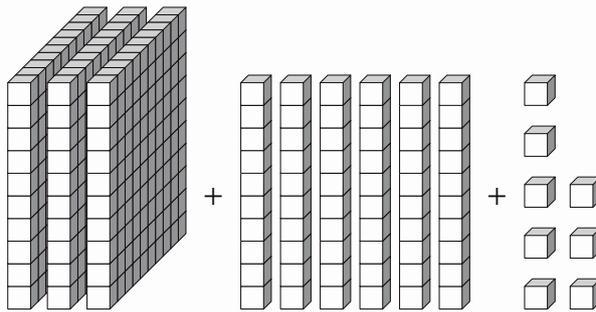
1. [Counting]

Count on by 5s from 730.

730				
-----	--	--	--	--

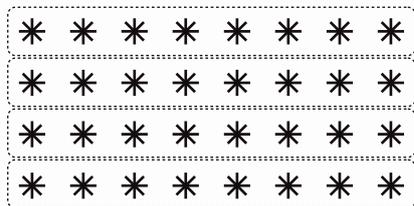
2. [Addition / Subtraction]

Complete the addition.



$$300 + 60 + 8 = \boxed{\phantom{000}}$$

3. [Multiplication / Division]



32 divided into groups of 8 =

$$32 \div 8 = \boxed{\phantom{00}}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 275 \\ + 115 \\ \hline \end{array}$$

5. [- Whole Numbers]

$$\begin{array}{r} 459 \\ - 216 \\ \hline \end{array}$$

6. [ $\times$  Whole Numbers]

$$6 \times 40 = \boxed{\phantom{000}}$$

7. [ $\div$  Whole Numbers]

	24	8	12	20	36
$\div 4$					

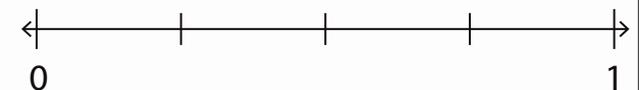
8. [Word Problems]

A table cut diamond has 9 faces. If a brilliant cut diamond has 58 faces, how many more faces is this? [Write the number sentence.]

$$\boxed{\phantom{00000}} =$$

9. [Fractions]

Show with an arrow the fraction  $\frac{1}{4}$  on the number line.



10. [Place Value]

Use greater than ( $>$ ) or less than ( $<$ ) to make this true.

$$898 \boxed{\phantom{<}} 889$$

11. [Word Numbers]

Write the number 362 in words.

--

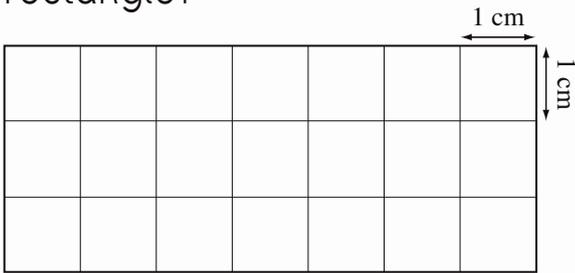
12. [Money]  
How many 10¢ coins make \$5.00?

13. [Number Patterns]  
27, 23, 19, 15, 11, ,

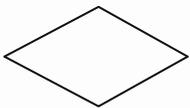
14. [Time]  
Which time is half past eleven?

- A) 11:30
- B) 11:00
- C) 11:10

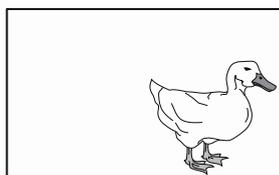
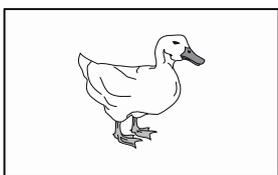
15. [Measuring]  
What is the perimeter of the rectangle?


 cm

16. [Shapes]  
How many vertices does a rhombus have?



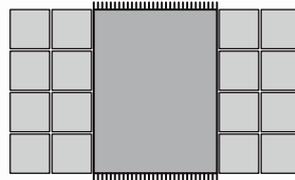

17. [Location]  
Has this duck been moved by a flip, a slide or a turn?




18. [Statistics / Probability]  
Which food takes two and a half hours to digest?

Digestion time			
⌚ ⌚ ⌚	⌚ ⌚	⏰ ⌚ ⌚	⌚ ⌚ ⌚ ⌚
walnuts	tomatoes	almonds	brussels sprouts
each ⌚ = 1 hour		each ⏰ = $\frac{1}{2}$ hour	

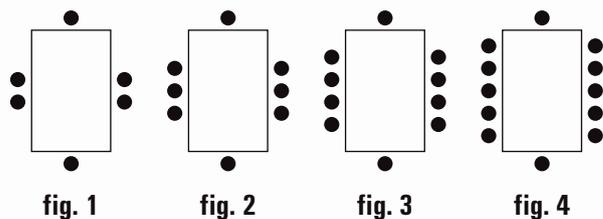
19. [Problem Solving 1]  
A rug is covering some of the 28 square tiles on the floor. How many tiles are covered by the rug?




20. [Problem Solving 2]  
A charity hoped to raise \$1000 from 2 events. They raised \$450 from the 1st event. The 2nd event raised \$300 more than the 1st event. How much more money did they raise than they hoped for?

 \$

21. [Problem Solving 3]  
If you continue the pattern, how many dots would be in the next figure?





Name: .....

1. [Counting]  
Which of these numbers is odd?

14 , 38 , 26 , 85 , 42 , 10

2. [Addition / Subtraction]  
Complete the subtraction.

Trade 1 long for 10 minis

$24 - 8 =$

3. [Multiplication / Division]  
Complete the multiplication.

$3 \times 8 =$

4. [+ Whole Numbers]

$$\begin{array}{r} 2068 \\ + 265 \\ \hline \end{array}$$

5. [- Whole Numbers]

	14	21	17	22	15
- 8	<input type="text"/>				

6. [× Whole Numbers]

$$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$$

7. [÷ Whole Numbers]

$$5 \overline{) 15}$$

8. [Word Problems]

A convertible has 2 seats. A minibus has 12 times more seats. How many seats does a minibus have? [Write the number sentence.]

=

9. [Fractions]

Complete the equivalent fractions.

$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$

$\frac{1}{3} = \frac{\text{[ ]}}{6}$

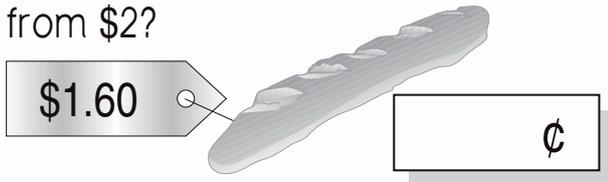
10. [Place Value]

Write the smallest 3-digit number that contains the digits 7, 2 and 5.

11. [Word Numbers]

Write in numerals:  
five thousand, eight hundred

12. [Money]  
How much change would you get from \$2?



13. [Number Patterns]  
1, 3, 4, 6, 7,  ,

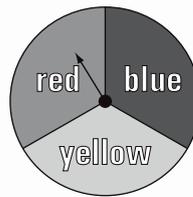
14. [Time]  
Write the time 'twenty to nine in the morning' in digital form.  
 :

15. [Measuring]  
Find the area of the shaded shape.  
 cm<sup>2</sup>
- 

16. [Shapes]  
Draw the lines of symmetry.

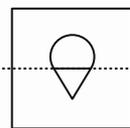
17. [Location]  
What is located at position B3?
- 

18. [Statistics / Probability]  
List the three possible outcomes when you spin this spinner.



19. [Problem Solving 1]  
The sum of two numbers is 13 and their difference is 3. What are the two numbers?  
 and

20. [Problem Solving 2]  
A transparent square sheet has a design inside. The sheet is folded in half along the dots.



Which image will appear after folding?

- A) B) C)
- 

21. [Problem Solving 3]  
Fill in the missing digits.
- $$\begin{array}{r} 4 \square \\ + 25 \\ \hline \square 6 \end{array}$$



Name: .....

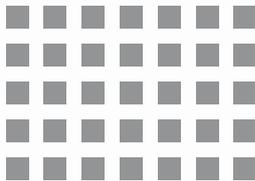
1. [Counting]  
Which of these numbers is even?  
19, 43, 71, 64, 59, 203

2. [Addition / Subtraction]  
Complete the subtraction.

Trade 1 long for 10 minis

$22 - 4 =$

3. [Multiplication / Division]  
Complete the multiplication.



$5 \times 7 =$

4. [+ Whole Numbers]

$$\begin{array}{r} 5871 \\ + 509 \\ \hline \end{array}$$

5. [- Whole Numbers]

	10	24	15	27	21
- 8	<input type="text"/>				

6. [× Whole Numbers]

$$\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$$

7. [÷ Whole Numbers]

$$4 \overline{) 16}$$

8. [Word Problems]

An SUV has 6 seats. A school bus has 8 times more seats. How many seats does a school bus have? [Write the number sentence.]

=

9. [Fractions]

Complete the equivalent fractions.

$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

$\frac{1}{4} = \frac{\text{□}}{8}$

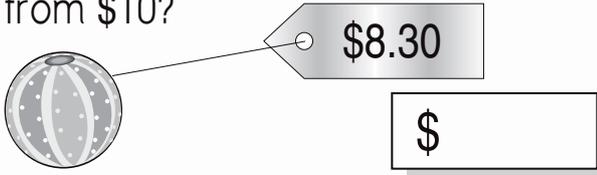
10. [Place Value]

Write the largest 3-digit number that contains the digits 3, 9 and 6.

11. [Word Numbers]

Write in numerals:  
six thousand, seven hundred

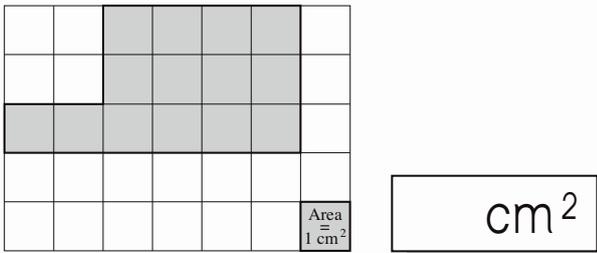
12. [Money]  
How much change would you get from \$10?



13. [Number Patterns]  
4, 6, 7, 9, 10, ,

14. [Time]  
Write the time 'ten to three in the morning' in digital form.

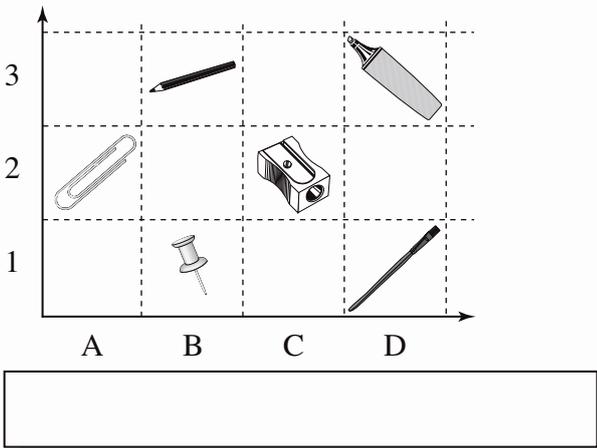
15. [Measuring]  
Find the area of the shaded shape.



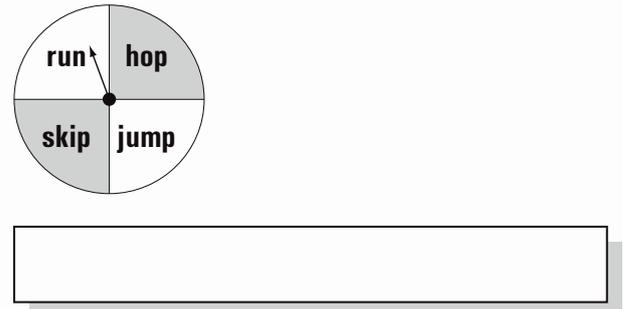
16. [Shapes]  
Draw the lines of symmetry.



17. [Location]  
What is located at position C2?

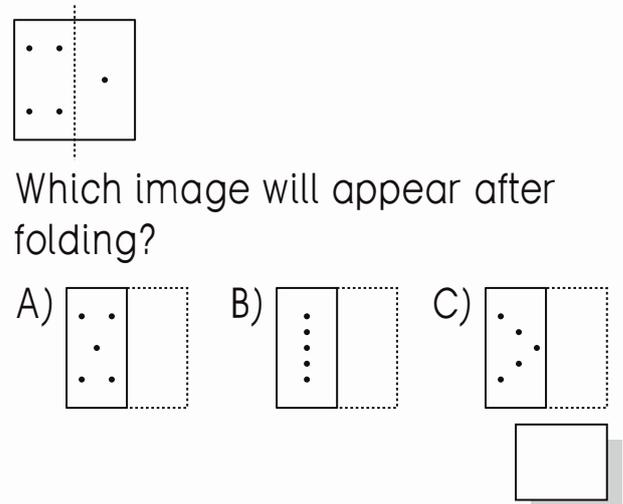


18. [Statistics / Probability]  
List the four possible outcomes when you spin this spinner.



19. [Problem Solving 1]  
The sum of two numbers is 10 and their difference is 4. What are the two numbers?  and

20. [Problem Solving 2]  
A transparent square sheet has a design inside. The sheet is folded in half along the dots.



21. [Problem Solving 3]  
Fill in the missing digits.

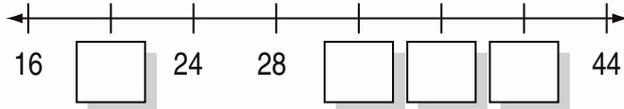
$$\begin{array}{r} \square \quad 1 \\ + \quad 4 \quad \square \\ \hline 6 \quad 6 \end{array}$$



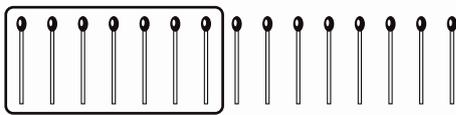
Name: .....

1. [Counting]

Complete the number line.

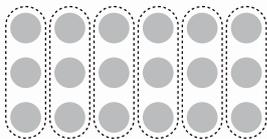


2. [Addition / Subtraction]



$$7 + \square = 15 \quad 15 - 7 = \square$$

3. [Multiplication / Division]



$$3 \times 6 = 18 \quad 18 \div 6 = \square$$

4. [+ Whole Numbers]

	12	14	20	17	11
+ 9					

5. [- Whole Numbers]

$$\begin{array}{r} 251 \\ - 137 \\ \hline \square \end{array}$$

6. [× Whole Numbers]

$$\begin{array}{r} 9 \\ \times 9 \\ \hline \square \end{array}$$

7. [÷ Whole Numbers]

$$15 \div \square = 5$$

8. [Word Problems]

A spider has 8 legs. A group of spiders has 24 legs. How many spiders are in the group?  
[Write the number sentence.]

$$\square = \square$$

9. [Fractions]

Use  $<$ ,  $=$  or  $>$  to make this true.

$\frac{1}{7}$						
$\frac{1}{7}$						

$$\frac{1}{7} \square \frac{5}{7}$$

10. [Place Value]

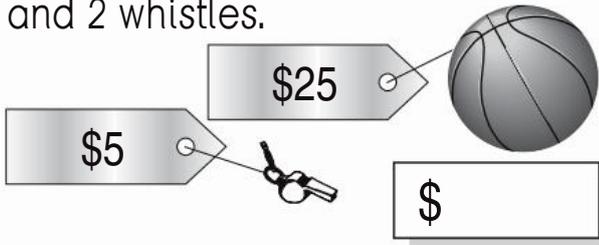
Place in order from smallest to largest:

675, 576, 756, 76, 657

11. [Word Numbers]

Write the number 9031 in words.

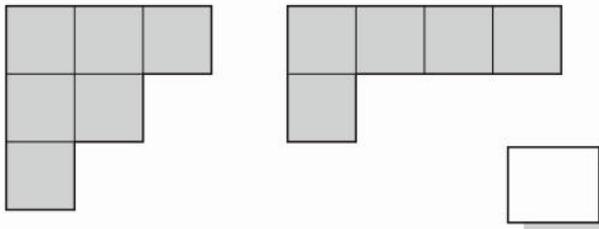
12. [Money]  
Calculate the cost of 1 basketball and 2 whistles.



13. [Number Patterns]  
10, 9, 7, 6, 4, ,

14. [Time]  
Write the time 12:45 in words.

15. [Measuring]  
The shapes below have the same:  
A) perimeter  
B) area  
C) perimeter and area

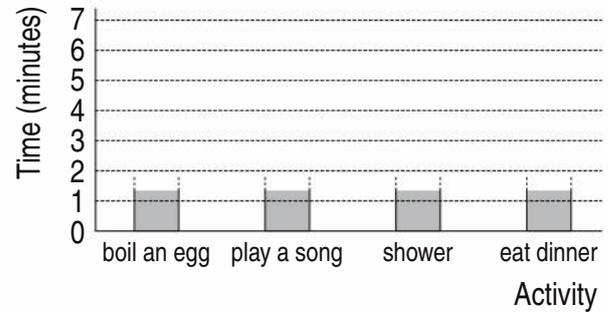


16. [Shapes]  
Which angle is a right angle?  
A) B) C)

17. [Location]  
In which position is the 'Star of David' on the flag of Israel?  
A) A2 B) B3 C) C1 D) B2
- 
- 

18. [Statistics / Probability]  
Use the table to complete the graph.

Time spent			
Activity	Minutes	Activity	Minutes
boil an egg	6	shower	2
play a song	3	eat dinner	7



19. [Problem Solving 1]  
Joe counted the snails by 6s.  
  
How many snails were left over when Trish counted them by 5s?

20. [Problem Solving 2]  
A red fox is 50 cm long, not including its tail and 82 cm including its tail. How long is the tail?  
 cm

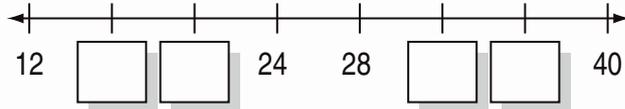
21. [Problem Solving 3]  
If  $10 \times 4 = 40$ , then  
 $13 \times 4 =$



Name: .....

1. [Counting]

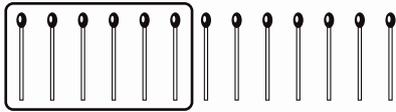
Complete the number line.



6. [× Whole Numbers]

$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

2. [Addition / Subtraction]

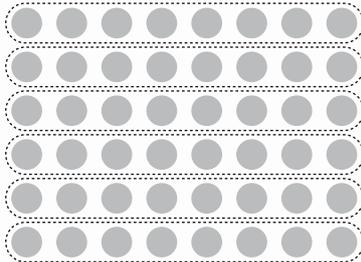


$$6 + \square = 13 \quad 13 - 6 = \square$$

7. [÷ Whole Numbers]

$$24 \div \square = 6$$

3. [Multiplication / Division]



$$6 \times 8 = 48 \quad 48 \div 6 = \square$$

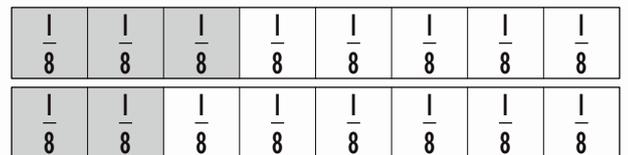
8. [Word Problems]

A centipede has 30 legs. How many pairs of legs does this equal? [Write the number sentence.]

$$\square = \square$$

9. [Fractions]

Use  $<$ ,  $=$  or  $>$  to make this true.



$$\frac{3}{8} \square \frac{2}{8}$$

4. [+ Whole Numbers]

	7	13	18	21	15
+ 9	<input type="text"/>				

10. [Place Value]

Place in order from smallest to largest:

903, 309, 93, 390, 900

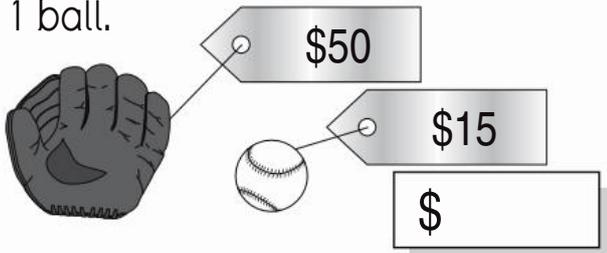
5. [- Whole Numbers]

$$\begin{array}{r} 519 \\ - 324 \\ \hline \end{array}$$

11. [Word Numbers]

Write the number 8070 in words.

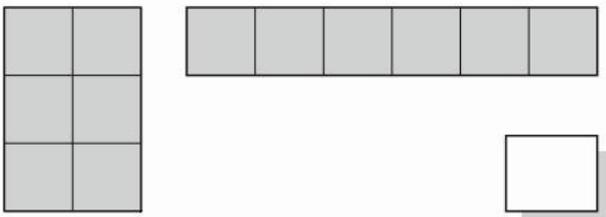
12. [Money]  
Calculate the cost of 2 mitts and 1 ball.



13. [Number Patterns]  
12, 11, 9, 8, 6,  ,

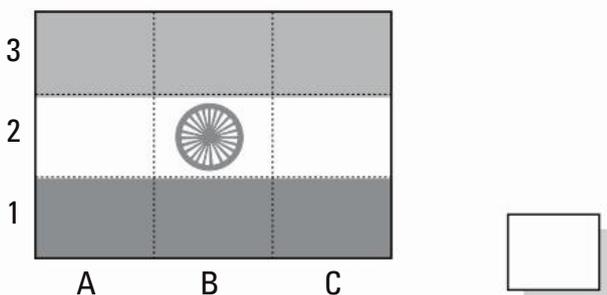
14. [Time]  
Write the time 2:10 in words.

15. [Measuring]  
The shapes below have the same:  
A) perimeter  
B) area  
C) perimeter and area



16. [Shapes]  
Which angle is a straight angle?  
A) B) C)

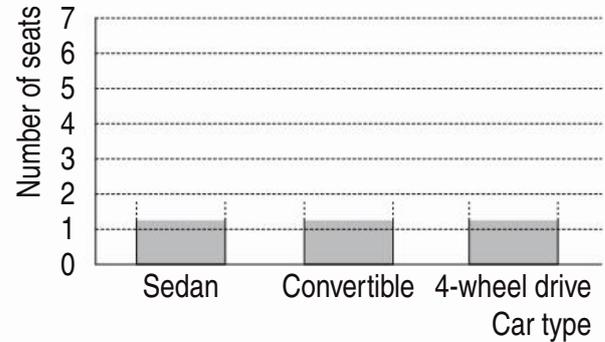
17. [Location]  
In which position is the 'Chakra' wheel on the flag of India?  
A) B2 B) C1 C) C2 D) A3



18. [Statistics / Probability]  
Use the table to complete the graph.

Number of car seats

Car type	Number of seats
Sedan	5
Convertible	2
4-wheel drive	7



19. [Problem Solving 1]  
John counted the caps by 5s.  
  
How many caps were left over when Wilma counted them by 4s?

20. [Problem Solving 2]  
A lemur is 50 cm long, not including its tail and 109 cm including its tail. How long is the tail?  
 cm

21. [Problem Solving 3]  
If  $10 \times 5 = 50$ , then  
 $13 \times 5 =$

# MATHS MATE



## Teacher Resource



### Teacher's Guide to the Use of Maths Mate

pages i - viii



### Student Workbook Answers

pages 3 - 72



### Student Workbook Short Answers

pages 1 - 8



### Problem Solving Hints & Solutions

pages 1 - 19



### Test Masters

pages 1 - 32



### Test Answers

pages 1 - 32



### Record Keeping Sheets

pages 1 - 10





Name: .....

1. [Counting]

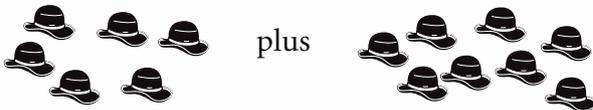
How many candles are there?



11

2. [Addition / Subtraction]

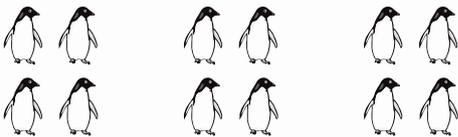
Complete the addition.



$$\boxed{6} + \boxed{8} = \boxed{14}$$

3. [Multiplication / Division]

How many groups of 4 penguins?



3

4. [+ Whole Numbers]

The sum of 9 and 5 equals

14

5. [- Whole Numbers]

21 take away 5 equals

16

6. [× Whole Numbers]

6 times 3 is

18

7. [÷ Whole Numbers]

How many 2s in 16?

8

8. [Word Problems]

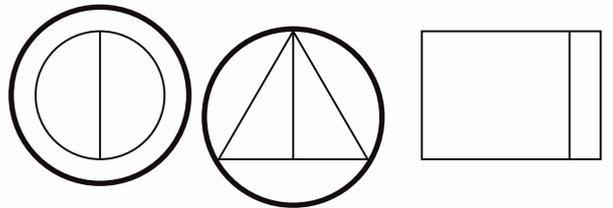
The annual average maximum temperature in China is 13°C and in Australia is 15°C higher. What is the annual average maximum temperature in Australia?

[Write the number sentence.]

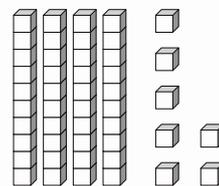
$$\boxed{13 + 15 = 28} \text{ } ^\circ\text{C}$$

9. [Fractions]

Circle the pictures that show halves.



10. [Place Value]



$$\boxed{4} \text{ tens } \boxed{7} \text{ ones} = \boxed{47}$$

11. [Word Numbers]

Write in numerals:  
fifty-two

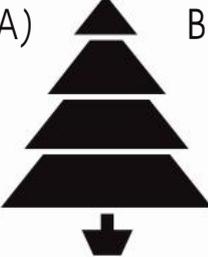
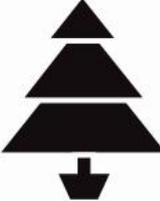
52

12. [Money]  
Circle the coin with the smallest value.



13. [Number Patterns]  
5, 7, 9, 11, 13, 15, 17

14. [Time]  
Yesterday was Thursday. What day is today?  
Friday

15. [Measuring]  
Which Christmas tree is the shortest?  
A)  B)  C)   
B

16. [Shapes]  
Circle the cube.  


17. [Location]  
Is most of the rubbish 'inside' or 'outside' the bin?  
  
inside

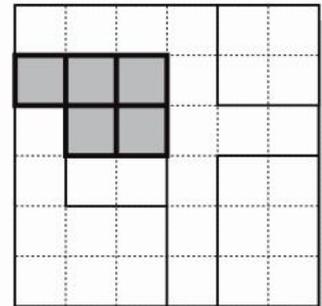
18. [Statistics / Probability]  
How many toes does a giraffe have on each foot?  
**Hoofed animals - Number of toes on a foot**

			
donkey	giraffe	antelope	sloth

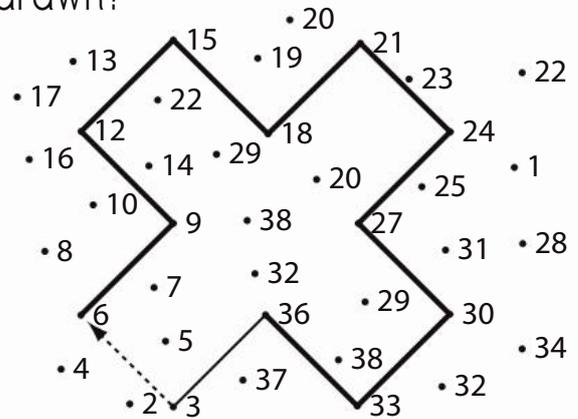
Key:  = 1 toe

2

19. [Problem Solving 1]  
Find and colour this shape inside the grid.

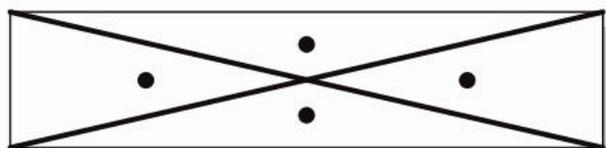


20. [Problem Solving 2]  
Start at 3. Connect the dots by counting by 3s. What have you drawn?



CROSS

21. [Problem Solving 3]  
Draw 2 straight lines to separate the dots so that one dot is in each area. [Hint: A ruler may help.]

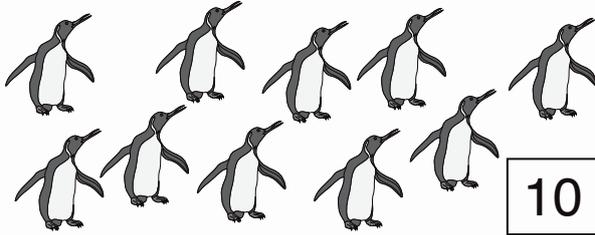




Name: .....

1. [Counting]

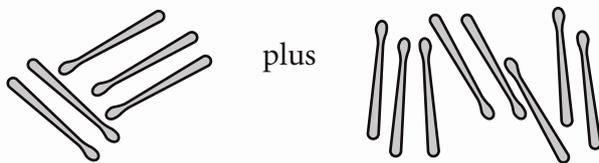
How many penguins are there?



10

2. [Addition / Subtraction]

Complete the addition.



$$\boxed{5} + \boxed{8} = \boxed{13}$$

3. [Multiplication / Division]

How many groups of 4 hearts?



4

4. [+ Whole Numbers]

The sum of 8 and 4 equals

12

5. [- Whole Numbers]

27 take away 9 equals

18

6. [× Whole Numbers]

7 times 2 is

14

7. [÷ Whole Numbers]

How many 3s in 27?

9

8. [Word Problems]

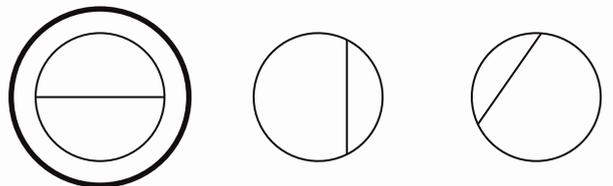
The annual average maximum temperature in Germany is 12°C and in Niger is 23°C higher. What is the annual average maximum temperature in Niger?

[Write the number sentence.]

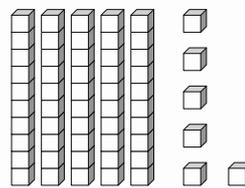
$$\boxed{12 + 23 = 35 \text{ } ^\circ\text{C}}$$

9. [Fractions]

Circle the picture that shows halves.



10. [Place Value]



$$\boxed{5} \text{ tens } \boxed{6} \text{ ones} = \boxed{56}$$

11. [Word Numbers]

Write in numerals:  
sixty-five

65

12. [Money]  
Circle the coin with the smallest value.



13. [Number Patterns]

6, 8, 10, 12, 14, **16, 18**

14. [Time]  
Yesterday was Friday. What day is today?

**Saturday**

15. [Measuring]  
Which musical instrument is the shortest?



16. [Shapes]  
Circle the cone.



17. [Location]  
Is the sponge 'inside' or 'outside' the bucket?



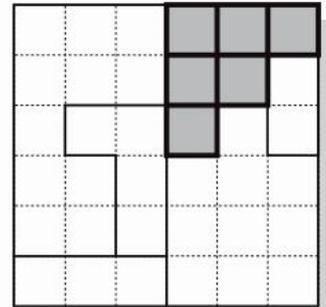
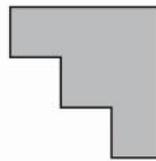
**outside**

18. [Statistics / Probability]  
How much is the bunch of celery?

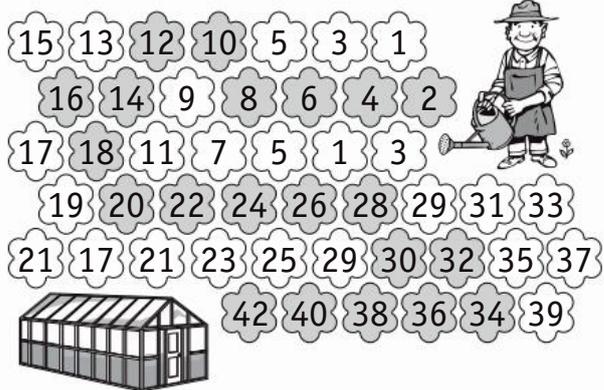
**Cost of groceries**

	\$		
\$	\$	\$	\$
\$	\$	\$	\$
Each \$ = 1 dollar		<b>3 dollars</b>	

19. [Problem Solving 1]  
Find and colour this shape inside the grid.



20. [Problem Solving 2]  
Start at 2. Colour the flower path to the greenhouse by counting by 2s.



21. [Problem Solving 3]  
Draw 2 straight lines to separate the dots so that one dot is in each area. [Hint: A ruler may help.]





Name: .....

1. [Counting]

Count on from 357.

357	358	359	360	361
-----	-----	-----	-----	-----

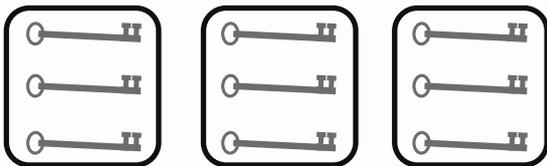
2. [Addition / Subtraction]

Circle the numbers that make 10, then add.

$$\textcircled{7} + 6 + \textcircled{3} = \boxed{16}$$

3. [Multiplication / Division]

Circle to make 3 equal groups.



$$9 \text{ divided into } 3 \text{ groups} = \boxed{3}$$

4. [+ Whole Numbers]

	5	6	2	9	4
+ 5	10	11	7	14	9

5. [- Whole Numbers]

	10	6	13	9	8
- 4	6	2	9	5	4

6. [× Whole Numbers]

	7	3	5	9	6
× 2	14	6	10	18	12

7. [÷ Whole Numbers]

$$60 \div 10 = \boxed{6}$$

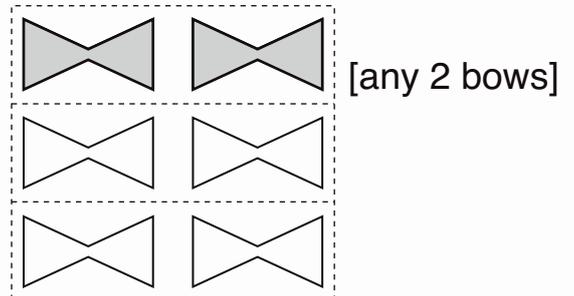
8. [Word Problems]

In 2020, the tallest man in the world was 251 cm tall. The tallest New Zealander, Ron Bax, was 225 cm tall. How many centimetres shorter was Ron Bax? [Write the number sentence.]

$$\boxed{251 - 225 = 26 \text{ cm}}$$

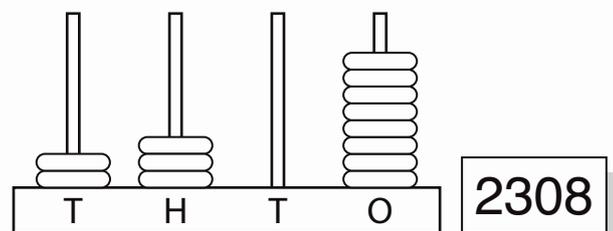
9. [Fractions]

Colour one third of the bows.



10. [Place Value]

Write the numeral.

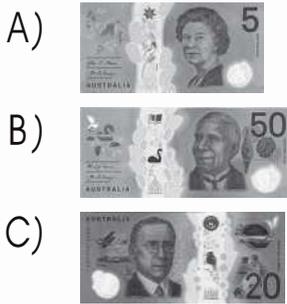


11. [Word Numbers]

Write the number 69 in words.

**sixty-nine**

12. [Money]  
Which note has the greatest value?



**B**

13. [Number Patterns]

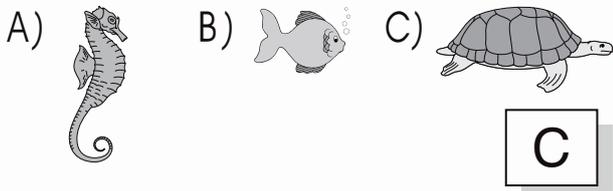
14, 12, 10, 8, 6, **4, 2**

14. [Time]  
Which day of the week is Saint Patrick's Day in 2021?

MARCH - 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

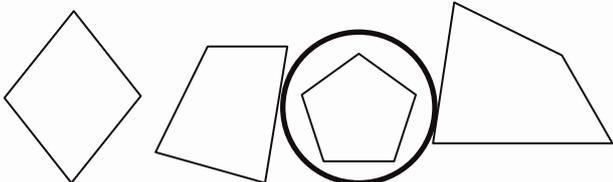
**Wednesday**

15. [Measuring]  
Which animal is likely to weigh the most?



**C**

16. [Shapes]  
Circle the shape that does not belong.



17. [Location]  
Looking at the faces, who is to the right of Sad?



**Surprised**

18. [Statistics / Probability]  
Use tally marks (|) to show the number 7.

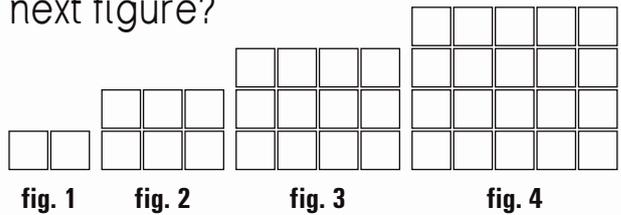


19. [Problem Solving 1]  
You have \$5. You buy two chocolates. How much change do you receive?



**\$ 2.00**

20. [Problem Solving 2]  
If you continue the pattern, how many squares would be in the next figure?



**30**

21. [Problem Solving 3]  
To order a sandwich, you may choose one bread and one meat. How many different sandwiches can be ordered?

**COOK'S FIX** 

**BREADS:** white, rye

**MEATS:** roast beef, chicken, ham

**6**



Name: .....

1. [Counting]

Count on from 547.

547	548	549	550	551
-----	-----	-----	-----	-----

2. [Addition / Subtraction]

Circle the numbers that make 10, then add.

$$7 + \textcircled{8} + \textcircled{2} = \boxed{17}$$

3. [Multiplication / Division]

Circle to make 5 equal groups.



$$10 \text{ divided into } 5 \text{ groups} = \boxed{2}$$

4. [+ Whole Numbers]

	0	8	4	7	6
+ 5	5	13	9	12	11

5. [- Whole Numbers]

	9	13	11	7	4
- 4	5	9	7	3	0

6. [× Whole Numbers]

	3	9	4	8	7
× 2	6	18	8	16	14

7. [÷ Whole Numbers]

$$30 \div 10 = \boxed{3}$$

8. [Word Problems]

In 2020, the tallest man in the world was 251 cm tall. The tallest American, Igor Vovkovinskiy, was 235 cm tall. How many centimetres shorter was Igor Vovkovinskiy?

[Write the number sentence.]

$$\boxed{251 - 235 = 16 \text{ cm}}$$

9. [Fractions]

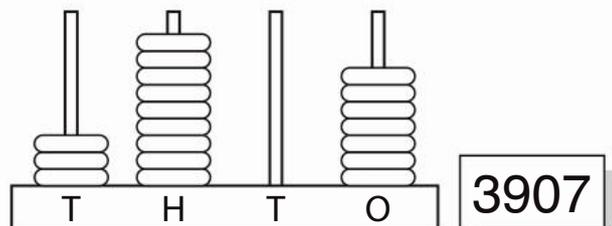
Colour one half of the flowers.



[any 3 flowers]

10. [Place Value]

Write the numeral.



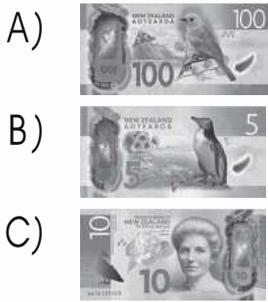
**3907**

11. [Word Numbers]

Write the number 73 in words.

**seventy-three**

12. [Money]  
Which note has the greatest value?



**A**

13. [Number Patterns]

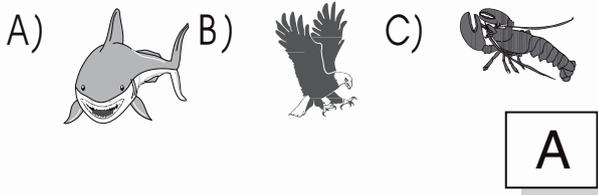
13, 11, 9, 7, 5, **3, 1**

14. [Time]  
Which day of the week is Pearl Harbor Remembrance Day in 2021?

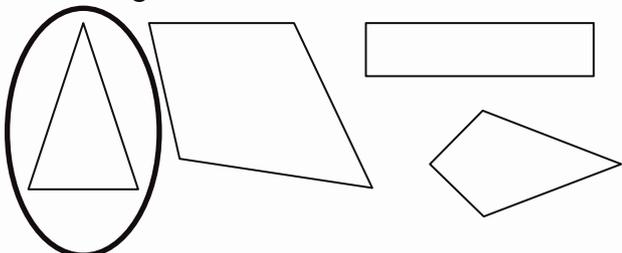
DECEMBER - 2021													
Sun	Mon	Tue	Wed	1	Thu	2	Fri	3	Sat	4			
Sun	5	Mon	6	Tue	7	Wed	8	Thu	9	Fri	10	Sat	11
Sun	12	Mon	13	Tue	14	Wed	15	Thu	16	Fri	17	Sat	18
Sun	19	Mon	20	Tue	21	Wed	22	Thu	23	Fri	24	Sat	25
Sun	26	Mon	27	Tue	28	Wed	29	Thu	30	Fri	31	Sat	

**Tuesday**

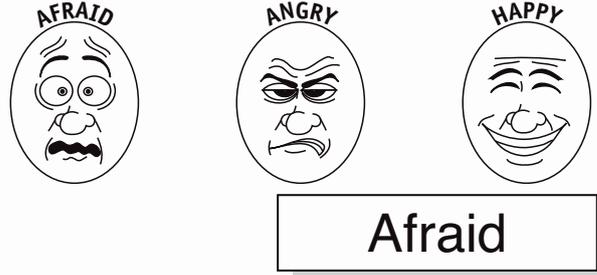
15. [Measuring]  
Which animal is likely to weigh the most?



16. [Shapes]  
Circle the shape that does not belong.



17. [Location]  
Looking at the faces, who is to the left of Angry?



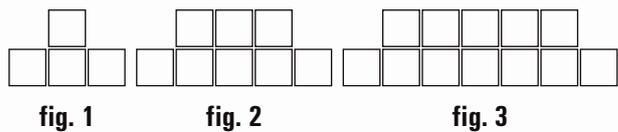
18. [Statistics / Probability]  
Use tally marks (|) to show the number 6.



19. [Problem Solving 1]  
You have \$10. You buy two milkshakes. How much change do you receive?



20. [Problem Solving 2]  
If you continue the pattern, how many squares would be in the next figure?



**16**

21. [Problem Solving 3]  
A customer may choose one flavour and one cone type at 'Ice Cream Delights'. How many ice cream choices are possible?





Name: .....

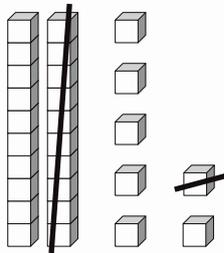
1. [Counting]

Use the bells to show counting by 3s.



2. [Addition / Subtraction]

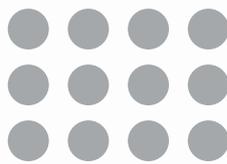
Complete the subtraction.



$$27 - 11 = \boxed{16}$$

3. [Multiplication / Division]

Complete the multiplication.



3 rows of 4 =

$$3 \times 4 = \boxed{12}$$

4. [+ Whole Numbers]

	4	8	7	13	2
+ 6	10	14	13	19	8

6. [× Whole Numbers]

	6	4	8	3	9
× 3	18	12	24	9	27

7. [÷ Whole Numbers]

$$45 \div 5 = \boxed{9}$$

8. [Word Problems]

How many legs do 8 ducks have?  
[Write the number sentence.]

$$\boxed{8 \times 2 = 16}$$

9. [Fractions]

Draw a line to divide the snowman into halves.



10. [Place Value]

Expand 479.

**4** hundreds **7** tens **9** ones

5. [- Whole Numbers]

$$47 - 11 = \boxed{36}$$

11. [Word Numbers]

Write in numerals:

thirty

**30**

12. [Money]  
How much money in total?



\$ 1.60

13. [Number Patterns]

40 , 50 , 60 , 70 , 80 , 90

14. [Time]  
How many days in October?

31

15. [Measuring]  
Which object is about 1 metre high?

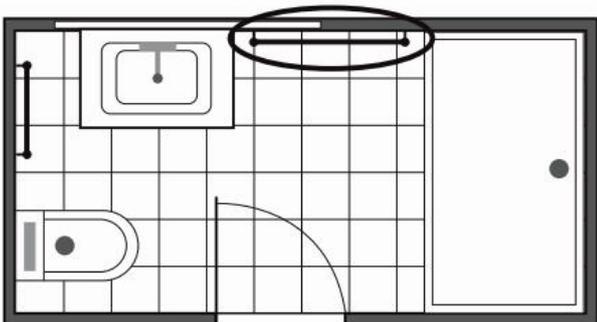
- A) front door
- B) kitchen bench
- C) computer

B

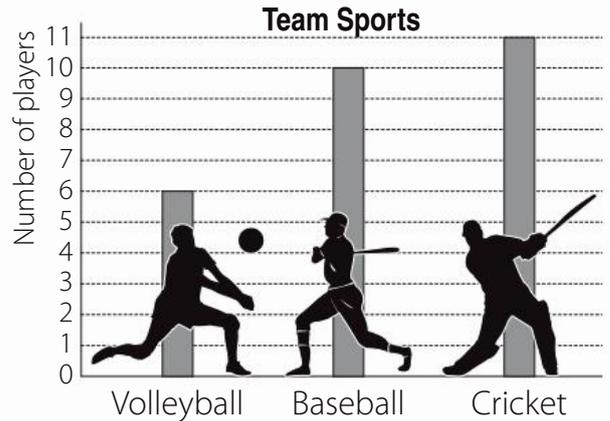
16. [Shapes]  
How many faces does a rectangular prism have?

6

17. [Location]  
Circle the towel rail which is on the opposite wall to the door.



18. [Statistics / Probability]  
Which team sport has 10 players?



baseball

19. [Problem Solving 1]  
Sue skip counted, starting at 31, until she reached 39. Could she be counting by threes?

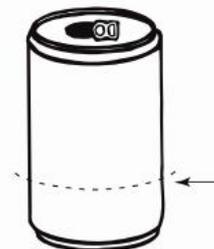
no

20. [Problem Solving 2]  
What number am I?  
I am less than 20.  
I am odd.  
You say me when you count by 3s and 5s.

15

21. [Problem Solving 3]  
This can holds 300 millilitres (mL). The arrow shows how much soft drink is in the can. About how much soft drink is in the can?

- A) 100 mL
- B) 200 mL
- C) 300 mL



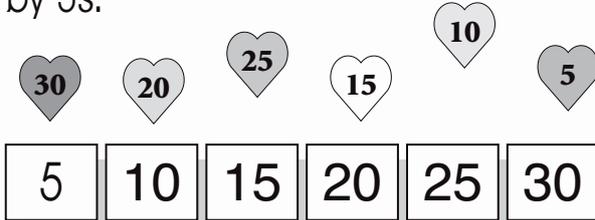
A



Name: .....

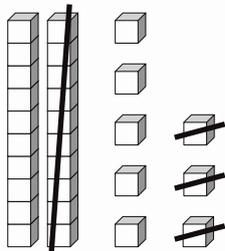
1. [Counting]

Use the hearts to show counting by 5s.



2. [Addition / Subtraction]

Complete the subtraction.



$$28 - 13 = \boxed{15}$$

3. [Multiplication / Division]

Complete the multiplication.



2 rows of 8 =

$$2 \times 8 = \boxed{16}$$

4. [+ Whole Numbers]

	17	4	3	6	9
+ 6	23	10	9	12	15

6. [× Whole Numbers]

	2	1	7	5	10
× 3	6	3	21	15	30

7. [÷ Whole Numbers]

$$18 \div 3 = \boxed{6}$$

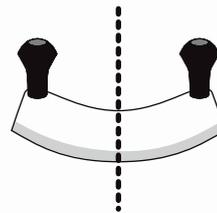
8. [Word Problems]

How many legs do 9 cats have?  
[Write the number sentence.]

$$\boxed{9 \times 4 = 36}$$

9. [Fractions]

Draw a line to divide the pizza cutter into halves.



10. [Place Value]

Expand 324.

**3 hundreds 2 tens 4 ones**

5. [- Whole Numbers]

$$35 - 12 = \boxed{23}$$

11. [Word Numbers]

Write in numerals:

fifty

**50**

12. [Money]  
How much money in total?



\$3.00

13. [Number Patterns]

30, 40, 50, 60, 70, 80

14. [Time]  
How many days in June?

30

15. [Measuring]  
A shoe weighs:

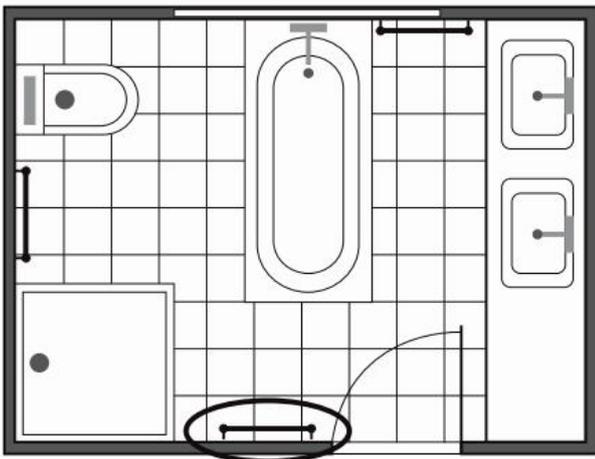
- A) less than a kilogram  
B) about a kilogram  
C) more than a kilogram

A

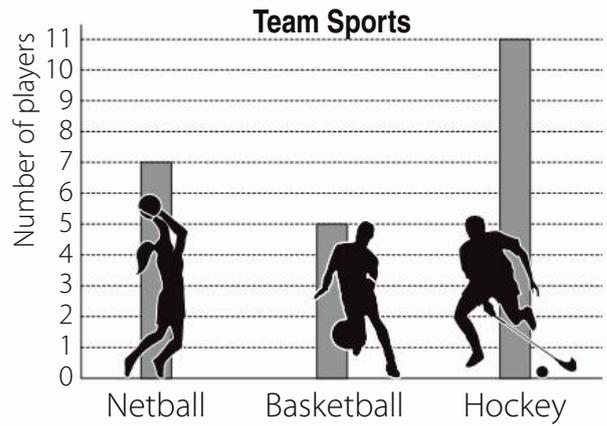
16. [Shapes]  
How many vertices does a cube have?

8

17. [Location]  
Circle the towel rail which is closest to the door.



18. [Statistics / Probability]  
Which team sport has 5 players?



basketball

19. [Problem Solving 1]  
Dan skip counted, starting at 20, until he reached 40. Could he be counting by fives?

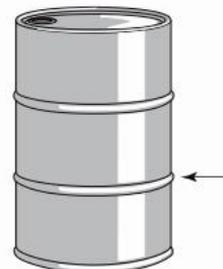
yes

20. [Problem Solving 2]  
What number am I?  
I am less than 30.  
I am even.  
You say me when you count by 4s and 5s.

20

21. [Problem Solving 3]  
This barrel holds 60 litres (L) when filled to the top. The arrow shows how much petrol is in the barrel. About how much petrol is in the barrel?

- A) 10 L  
B) 20 L  
C) 30 L



B



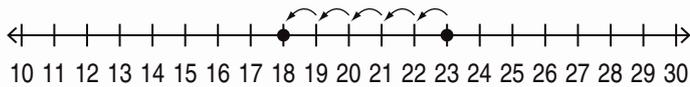
Name: .....

1. [Counting]

Count forwards by 10s.

870	880	890	900	910
-----	-----	-----	-----	-----

2. [Addition / Subtraction]



$$23 - 5 = 18$$

3. [Multiplication / Division]



$$2 + 2 + 2 + 2 + 2 + 2 = 12$$

$$6 \times 2 = 12$$

4. [+ Whole Numbers]

$$34 + 25 = 59$$

5. [- Whole Numbers]

	8	12	24	15	10
- 7	1	5	17	8	3

6. [× Whole Numbers]

	5	2	9	6	3
× 4	20	8	36	24	12

7. [÷ Whole Numbers]

	15	5	35	20	40
÷ 5	3	1	7	4	8

8. [Word Problems]

There are 32 pieces on the chess board. Half of them are white.

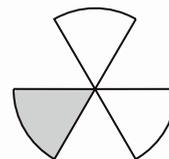
How many pieces are white?

[Write the number sentence.]

$$32 \div 2 = 16$$

9. [Fractions]

Write a fraction for the shaded part.



1

3

10. [Place Value]

Write the value of each digit.

$$587 = 500 + 80 + 7$$

11. [Word Numbers]

Write the number 105 in words.

one hundred and five

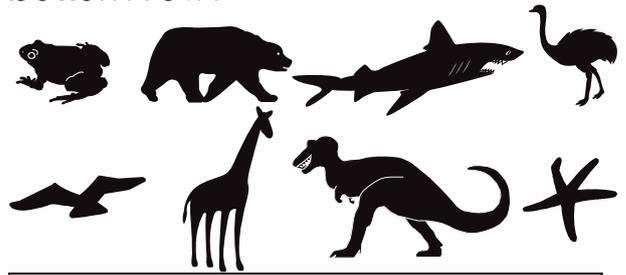
12. [Money]  
Circle the exact money needed to download a song.



\$2.80



17. [Location]  
Which animal is in the third column from the left and on the bottom row?



dinosaur

13. [Number Patterns]  
19, 16, 13, 10, 7, 4, 1

18. [Statistics / Probability]  
Complete the tally table.

**Melbourne - December 2011**

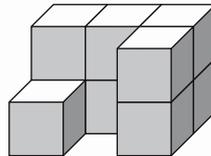
Weather	Tally	Number
days of hail		1
days of thunder		4
days of rain		12

14. [Time]  
Use 'to' or 'past' to complete the time.



Twenty to seven.

19. [Problem Solving 1]  
How many cubes in this shape?



9

15. [Measuring]  
Which unit is most commonly used to measure the width of a cupboard?

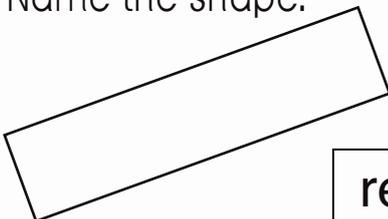
- A) kilometre (km)  
B) millimetre (mm)

**B**

20. [Problem Solving 2]  
In how many ways can you make one dollar using just 50 cent coins and 10 cent coins?

3

16. [Shapes]  
Name the shape.



rectangle

21. [Problem Solving 3]  
If a marble weighs 40 grams (g), how much does a banana weigh?



80 g



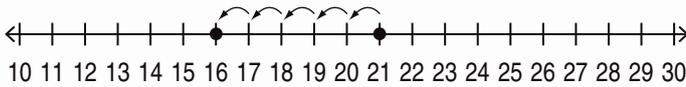
Name: .....

1. [Counting]

Count forwards by 10s.

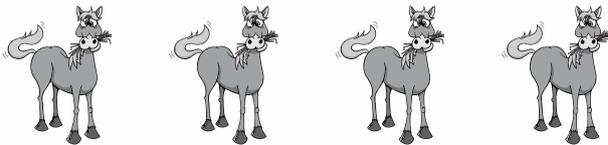
690	700	710	720	730
-----	-----	-----	-----	-----

2. [Addition / Subtraction]



$$21 - 5 = 16$$

3. [Multiplication / Division]



$$4 + 4 + 4 + 4 = 16$$

$$4 \times 4 = 16$$

4. [+ Whole Numbers]

$$72 + 18 = 90$$

5. [- Whole Numbers]

	17	11	13	20	19
- 7	10	4	6	13	12

6. [× Whole Numbers]

	1	4	10	7	8
× 4	4	16	40	28	32

7. [÷ Whole Numbers]

	25	10	30	45	50
÷ 5	5	2	6	9	10

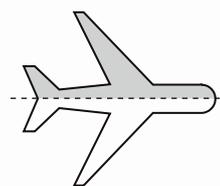
8. [Word Problems]

There are 60 pieces on the Chinese checkers board. The pieces are grouped equally in six different colour sets. How many pieces are in each colour set? [Write the number sentence.]

$$60 \div 6 = 10$$

9. [Fractions]

Write a fraction for the shaded part.



1
2

10. [Place Value]

Write the value of each digit.

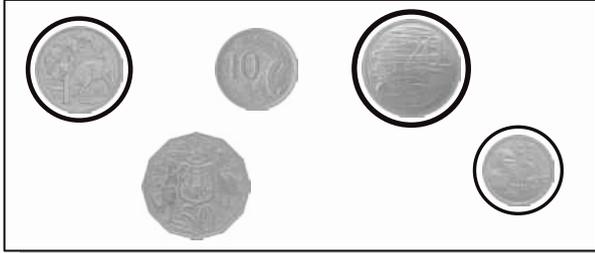
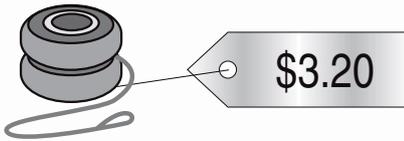
$$327 = 300 + 20 + 7$$

11. [Word Numbers]

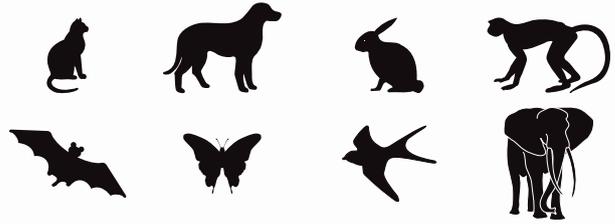
Write the number 701 in words.

seven hundred and one

12. [Money]  
Circle the exact money needed to buy the yoyo.



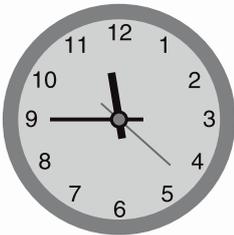
17. [Location]  
Which animal is in the second column from the left and on the bottom row?



butterfly

13. [Number Patterns]  
20, 17, 14, 11, 8, 5, 2

14. [Time]  
Use 'to' or 'past' to complete the time.



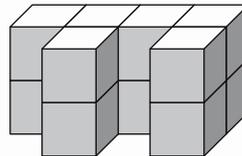
A quarter to twelve.

18. [Statistics / Probability]  
Complete the tally table.

Days of fog - September 2012

City	Tally	Number
New York City	III	8
Denver	I	6
San Jose		4
Miami		13

19. [Problem Solving 1]  
How many cubes in this shape?



12

15. [Measuring]  
Which unit is most commonly used to measure the height of a tree?

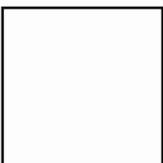
- A) metre (m)  
B) millimetre (mm)

A

20. [Problem Solving 2]  
In how many ways can you make three dollars using just 50 cent coins and 20 cent coins?

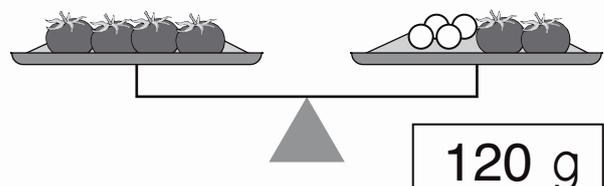
4

16. [Shapes]  
Name the shape.



square

21. [Problem Solving 3]  
If a marble weighs 60 grams (g), how much does a tomato weigh?



120 g



Name: .....

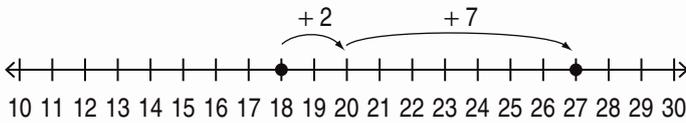
1. [Counting]

Complete the skip counting pattern.

4 8 12 16 20 24 28

2. [Addition / Subtraction]

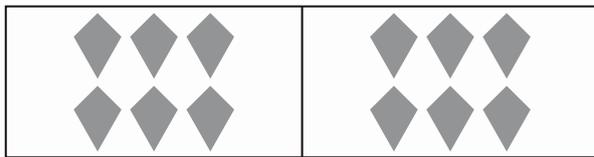
How much must be added to 18 to make 27?



$$27 - 18 = \boxed{9}$$

3. [Multiplication / Division]

Double this number of kites by first drawing them.



$$\boxed{2} \times \boxed{6} = \boxed{12}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 327 \\ + 340 \\ \hline \end{array}$$

$$\boxed{667}$$

5. [- Whole Numbers]

$$\begin{array}{r} 38 \\ - 17 \\ \hline \end{array}$$

$$\boxed{21}$$

6. [× Whole Numbers]

	3	5	4	6	8
× 6	18	30	24	36	48

7. [÷ Whole Numbers]

	9	15	18	6	27
÷ 3	3	5	6	2	9

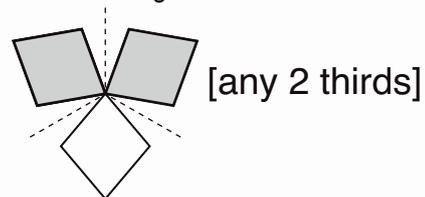
8. [Word Problems]

The pizza took 15 minutes to cook. Then the apple pie went into the oven for 35 minutes. How long did everything take to cook?  
[Write the number sentence.]

$$\boxed{15 + 35 = 50 \text{ min}}$$

9. [Fractions]

Colour  $\frac{2}{3}$  of the shape.



10. [Place Value]

What is the value of the underlined digit in 249?

A) 4      B) 40      C) 400

**B**

11. [Word Numbers]

Write in numerals:

six hundred and fifty-nine

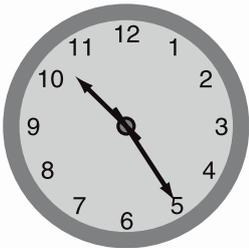
**659**

12. [Money]  
You have \$14.50. Which two items can you afford to buy?

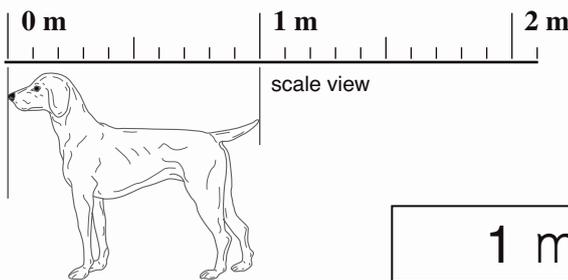
- A)  \$7.95
  - B)  \$7.50
  - C)  \$6.95
- B & C**

13. [Number Patterns]  
2, 7, 12, 17, 22, **27, 32**

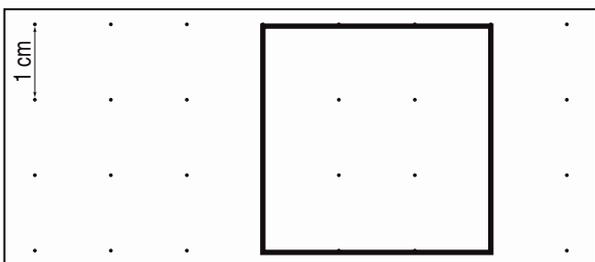
14. [Time]  
Draw hands on the clock to show twenty-five past ten.



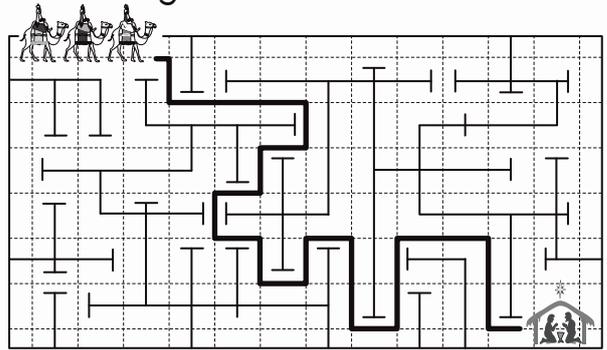
15. [Measuring]  
Use the scale. How long is the dog?



16. [Shapes]  
Draw a square with side lengths of 3 cm on the grid.

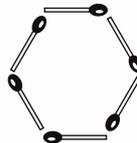


17. [Location]  
Draw a path through the maze so that the three wise men can find the manger.



18. [Statistics / Probability]  
What is the chance ...  
"Someone you know wins lotto."  
A) possible  
B) impossible **A**

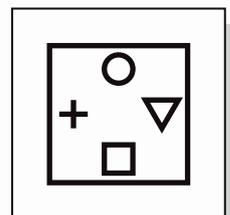
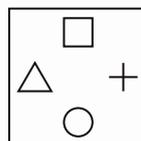
19. [Problem Solving 1]  
This is a hexagon made out of matches. How many matches in 3 hexagons?



**18**

20. [Problem Solving 2]  
A red kangaroo weighs 70 kg. There are 4 kangaroos in the mob. How much does the mob weigh? **280 kg**

21. [Problem Solving 3]  
Redraw this square after it is rotated half a turn.





Name: .....

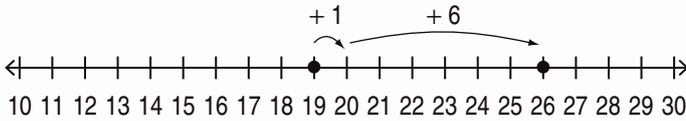
1. [Counting]

Complete the skip counting pattern.

10 20 30 40 50 60

2. [Addition / Subtraction]

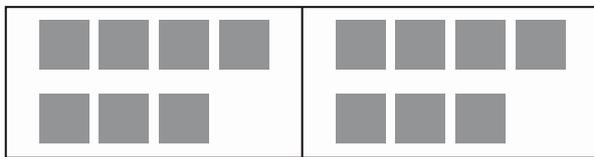
How much must be added to 19 to make 26?



$$26 - 19 = \boxed{7}$$

3. [Multiplication / Division]

Double this number of squares by first drawing them.



$$\boxed{2} \times \boxed{7} = \boxed{14}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 255 \\ + 612 \\ \hline \end{array}$$

$$\boxed{867}$$

5. [- Whole Numbers]

$$\begin{array}{r} 37 \\ - 15 \\ \hline \end{array}$$

$$\boxed{22}$$

6. [× Whole Numbers]

	2	7	8	3	9
× 6	12	42	48	18	54

7. [÷ Whole Numbers]

	24	21	12	3	30
÷ 3	8	7	4	1	10

8. [Word Problems]

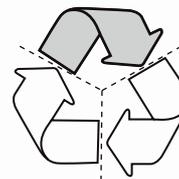
For breakfast Leo ate cereal which had 140 calories of energy. He also ate milk which had 75 calories. How many calories altogether did Leo have for breakfast?

[Write the number sentence.]

$$\boxed{140 + 75 = 215}$$

9. [Fractions]

Colour  $\frac{1}{3}$  of the shape.



[any third]

10. [Place Value]

What is the value of the underlined digit in 684?

A) 6      B) 60      C) 600

C

11. [Word Numbers]

Write in numerals:  
three hundred and  
seventeen

317

12. [Money]  
You have \$4. Which two items can you afford to buy?

A)  B)  C) 

\$1.90      \$2.05      \$2.95

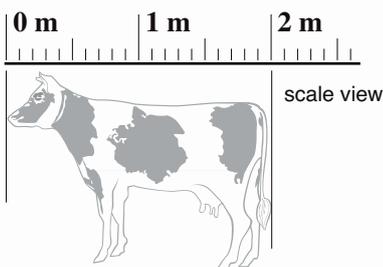
**A & B**

13. [Number Patterns]  
3, 8, 13, 18, 23, **28, 33**

14. [Time]  
Draw hands on the clock to show twenty-five to six.

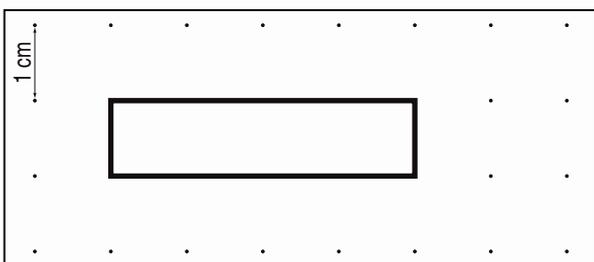


15. [Measuring]  
Use the scale. How long is the cow?

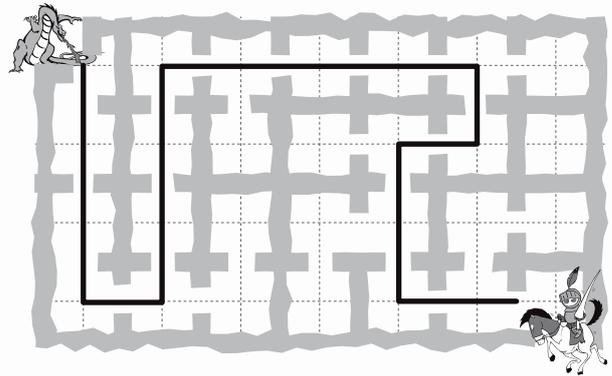


**2 m**

16. [Shapes]  
Draw a rectangle with a length of 4 cm and a width of 1 cm on the grid.



17. [Location]  
Draw a path through the maze so that the knight can reach the dragon.



18. [Statistics / Probability]  
What is the chance ...  
"Your mum will have green skin tomorrow."

A) possible      B) impossible      **B**

19. [Problem Solving 1]  
This is a pentagon made out of matches. How many matches in 4 pentagons?

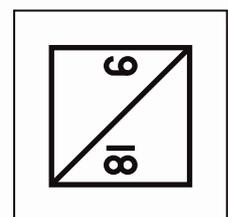
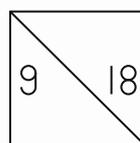


**20**

20. [Problem Solving 2]  
Sam replaced 36 car tyres. If he replaced all 4 tyres on each car, how many cars did he fix?

**9**

21. [Problem Solving 3]  
Redraw this square after it is rotated a quarter of a turn clockwise.





Name: .....

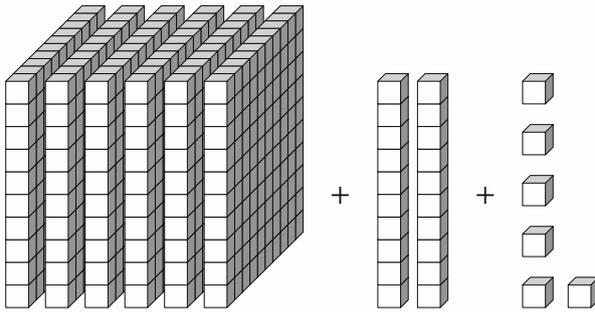
1. [Counting]

Count on by 5s from 640.

640	645	650	655	660
-----	-----	-----	-----	-----

2. [Addition / Subtraction]

Complete the addition.



$$600 + 20 + 6 = \boxed{626}$$

3. [Multiplication / Division]



20 divided into groups of 4 =

$$20 \div 4 = \boxed{5}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 426 \\ + 156 \\ \hline \end{array}$$

**582**

5. [- Whole Numbers]

$$\begin{array}{r} 365 \\ - 231 \\ \hline \end{array}$$

**134**

6. [× Whole Numbers]

$$7 \times 40 = \boxed{280}$$

7. [+ Whole Numbers]

	32	16	20	8	28
÷ 4	8	4	5	2	7

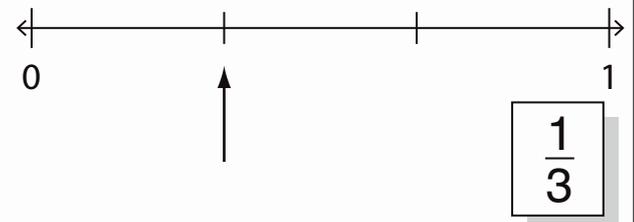
8. [Word Problems]

The average person falls asleep in 7 minutes. It took Isaac 21 minutes to fall asleep. How much longer did it take Isaac to fall asleep than the average person? [Write the number sentence.]

$$\boxed{21 - 7 = 14 \text{ min}}$$

9. [Fractions]

What fraction is shown by the arrow on the number line?



$\frac{1}{3}$

10. [Place Value]

Use greater than (>) or less than (<) to make this true.

$$322 \boxed{<} 332$$

11. [Word Numbers]

Write the number 231 in words.

**two hundred and thirty-one**

12. [Money]  
How many 10¢ coins make \$2.00?

20

13. [Number Patterns]

26, 22, 18, 14, 10, 6, 2

14. [Time]

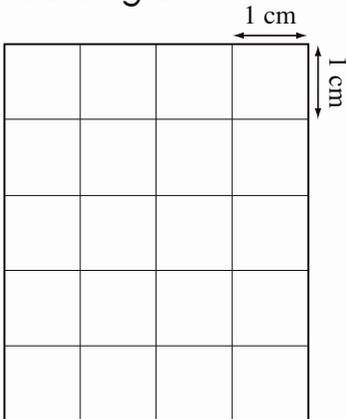
Which time is quarter past nine?

- A) 9:30
- B) 9:15
- C) 9:00

B

15. [Measuring]

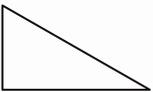
What is the perimeter of the rectangle?



18 cm

16. [Shapes]

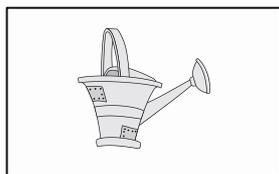
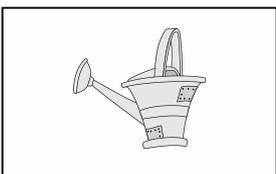
How many sides does a triangle have?



3

17. [Location]

Has this watering can been moved by a flip, a slide or a turn?



flip

18. [Statistics / Probability]

How many eyes does a huntsman spider have?

Spider: number of eyes

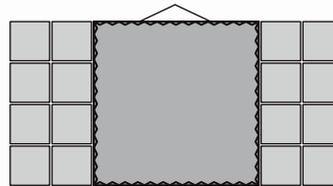
Red-backed spider	Spitting spider	Huntsman spider	Caponiidae spider

Key: = 2 eyes

8

19. [Problem Solving 1]

A painting is covering some of the 32 square tiles on a wall. How many tiles are covered by the painting?



16

20. [Problem Solving 2]

Ella makes 15 hats a day, working 5 days a week. The cost of making 1 hat is \$10. The hats sell for \$30 each. How much money per week does Ella earn in total, if she sells all the hats?

\$1500

21. [Problem Solving 3]

If you continue the pattern, how many dots would be in the next figure?

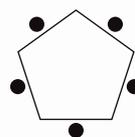


fig. 1

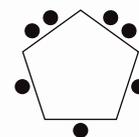


fig. 2

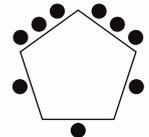


fig. 3

11



Name: .....

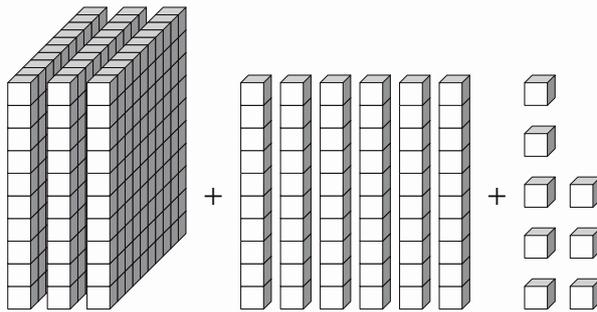
1. [Counting]

Count on by 5s from 730.

730	735	740	745	750
-----	-----	-----	-----	-----

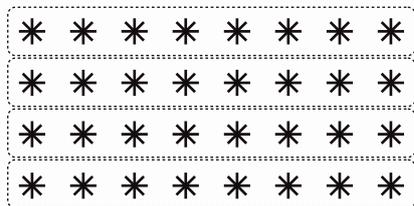
2. [Addition / Subtraction]

Complete the addition.



$$300 + 60 + 8 = \boxed{368}$$

3. [Multiplication / Division]



32 divided into groups of 8 =

$$32 \div 8 = \boxed{4}$$

4. [+ Whole Numbers]

$$\begin{array}{r} 275 \\ + 115 \\ \hline \end{array}$$

**390**

5. [- Whole Numbers]

$$\begin{array}{r} 459 \\ - 216 \\ \hline \end{array}$$

**243**

6. [× Whole Numbers]

$$6 \times 40 = \boxed{240}$$

7. [÷ Whole Numbers]

	24	8	12	20	36
÷ 4	6	2	3	5	9

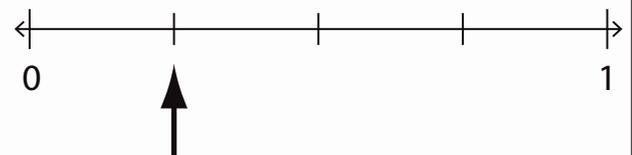
8. [Word Problems]

A table cut diamond has 9 faces. If a brilliant cut diamond has 58 faces, how many more faces is this? [Write the number sentence.]

$$\boxed{58 - 9 = 49}$$

9. [Fractions]

Show with an arrow the fraction  $\frac{1}{4}$  on the number line.



10. [Place Value]

Use greater than (>) or less than (<) to make this true.

$$898 \boxed{>} 889$$

11. [Word Numbers]

Write the number 362 in words.

**three hundred and sixty-two**

12. [Money]  
How many 10¢ coins make \$5.00?

50

13. [Number Patterns]

27, 23, 19, 15, 11, 7, 3

14. [Time]

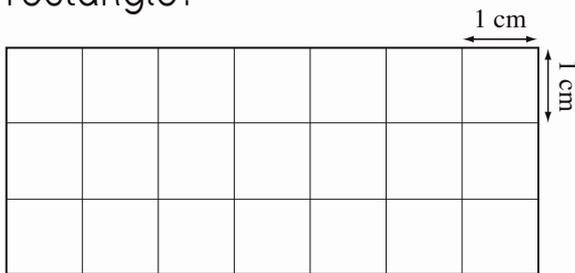
Which time is half past eleven?

- A) 11:30
- B) 11:00
- C) 11:10

A

15. [Measuring]

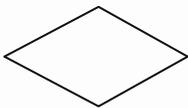
What is the perimeter of the rectangle?



20 cm

16. [Shapes]

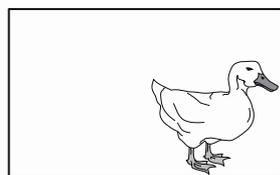
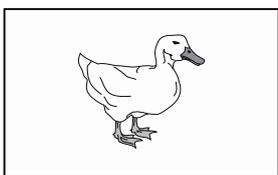
How many vertices does a rhombus have?



4

17. [Location]

Has this duck been moved by a flip, a slide or a turn?



slide

18. [Statistics / Probability]

Which food takes two and a half hours to digest?

**Digestion time**

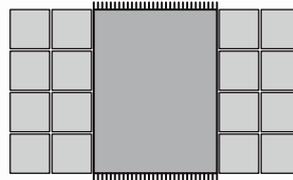
⌚ ⌚ ⌚	⌚ ⌚	⚠ ⌚ ⌚	⌚ ⌚ ⌚ ⌚
walnuts	tomatoes	almonds	brussels sprouts

each ⌚ = 1 hour      each ⚠ =  $\frac{1}{2}$  hour

almonds

19. [Problem Solving 1]

A rug is covering some of the 28 square tiles on the floor. How many tiles are covered by the rug?



12

20. [Problem Solving 2]

A charity hoped to raise \$1000 from 2 events. They raised \$450 from the 1st event. The 2nd event raised \$300 more than the 1st event. How much more money did they raise than they hoped for?

\$ 200

21. [Problem Solving 3]

If you continue the pattern, how many dots would be in the next figure?

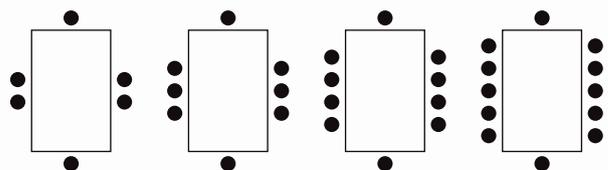


fig. 1

fig. 2

fig. 3

fig. 4

14



Name: .....

1. [Counting]

Which of these numbers is odd?

14, 38, 26, 85, 42, 10

**85**

2. [Addition / Subtraction]

Complete the subtraction.

Trade 1 long for 10 minis

$24 - 8 =$  **16**

3. [Multiplication / Division]

Complete the multiplication.



$3 \times 8 =$  **24**

4. [+ Whole Numbers]

$$\begin{array}{r} 2068 \\ + 265 \\ \hline \end{array}$$

**2333**

5. [- Whole Numbers]

	14	21	17	22	15
- 8	6	13	9	14	7

6. [× Whole Numbers]

$$\begin{array}{r} 5 \\ \times 6 \\ \hline 30 \end{array}$$

7. [÷ Whole Numbers]

$$\begin{array}{r} 3 \\ 5 \overline{) 15} \end{array}$$

8. [Word Problems]

A convertible has 2 seats. A minibus has 12 times more seats. How many seats does a minibus have? [Write the number sentence.]

**$12 \times 2 = 24$**

9. [Fractions]

Complete the equivalent fractions.

$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$

$\frac{1}{3} =$   **$\frac{2}{6}$**

10. [Place Value]

Write the smallest 3-digit number that contains the digits 7, 2 and 5.

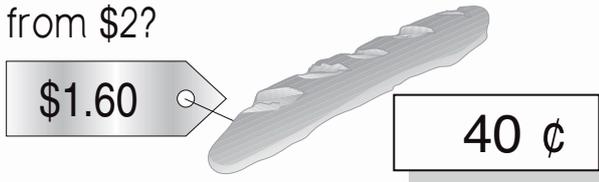
**257**

11. [Word Numbers]

Write in numerals:  
five thousand, eight hundred

**5800**

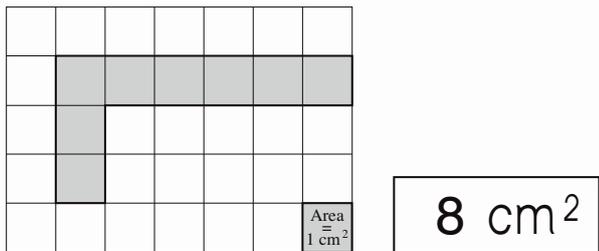
12. [Money]  
How much change would you get from \$2?



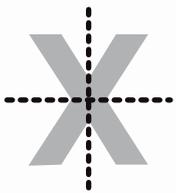
13. [Number Patterns]  
1, 3, 4, 6, 7, **9, 10**

14. [Time]  
Write the time 'twenty to nine in the morning' in digital form.  
**8 : 40 am**

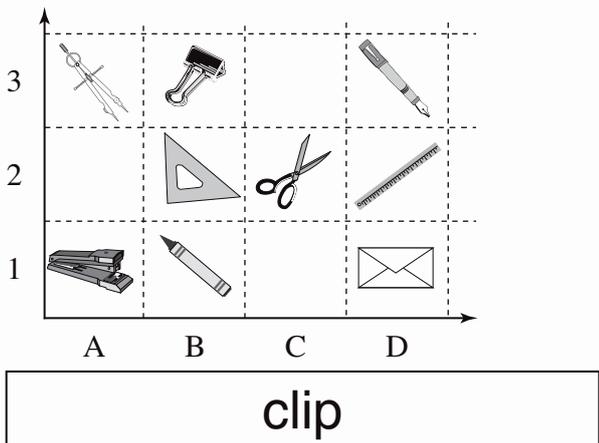
15. [Measuring]  
Find the area of the shaded shape.



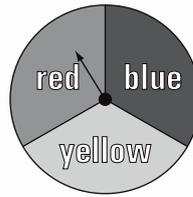
16. [Shapes]  
Draw the lines of symmetry.



17. [Location]  
What is located at position B3?



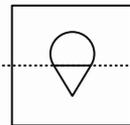
18. [Statistics / Probability]  
List the three possible outcomes when you spin this spinner.



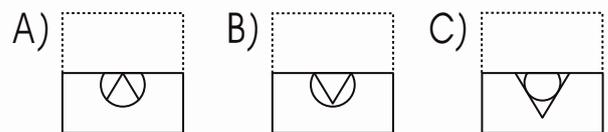
**red, blue, yellow**

19. [Problem Solving 1]  
The sum of two numbers is 13 and their difference is 3. What are the two numbers?  
**5 and 8**

20. [Problem Solving 2]  
A transparent square sheet has a design inside. The sheet is folded in half along the dots.



Which image will appear after folding?



**B**

21. [Problem Solving 3]  
Fill in the missing digits.

$$\begin{array}{r} 4 \quad \boxed{1} \\ + 2 \quad 5 \\ \hline \boxed{6} \quad 6 \end{array}$$



Name: .....

1. [Counting]

Which of these numbers is even?

19, 43, 71, 64, 59, 203

**64**

2. [Addition / Subtraction]

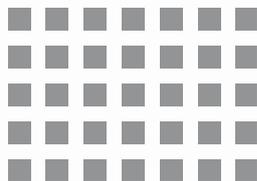
Complete the subtraction.

Trade 1 long for 10 minis

$22 - 4 =$  **18**

3. [Multiplication / Division]

Complete the multiplication.



$5 \times 7 =$  **35**

4. [+ Whole Numbers]

$$\begin{array}{r} 5871 \\ + 509 \\ \hline \end{array}$$

**6380**

5. [- Whole Numbers]

	10	24	15	27	21
- 8	2	16	7	19	13

6. [× Whole Numbers]

$$\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$$

**24**

7. [÷ Whole Numbers]

$$\begin{array}{r} 4 \\ 4 \overline{) 16} \end{array}$$

8. [Word Problems]

An SUV has 6 seats. A school bus has 8 times more seats. How many seats does a school bus have? [Write the number sentence.]

**$8 \times 6 = 48$**

9. [Fractions]

Complete the equivalent fractions.

$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

$\frac{1}{4} =$  **2**  $\frac{1}{8}$

10. [Place Value]

Write the largest 3-digit number that contains the digits 3, 9 and 6.

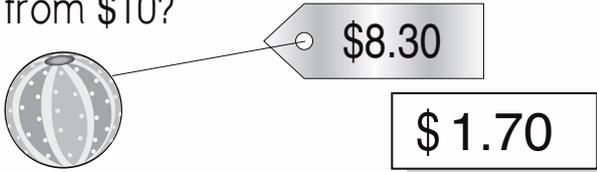
**963**

11. [Word Numbers]

Write in numerals:  
six thousand, seven hundred

**6700**

12. [Money]  
How much change would you get from \$10?



13. [Number Patterns]  
4, 6, 7, 9, 10, 12, 13

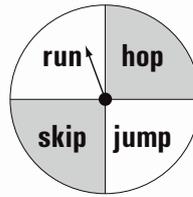
14. [Time]  
Write the time 'ten to three in the morning' in digital form. 2:50 am

15. [Measuring]  
Find the area of the shaded shape.
- 
- 14 cm<sup>2</sup>

16. [Shapes]  
Draw the lines of symmetry.
- 

17. [Location]  
What is located at position C2?
- 
- sharpener

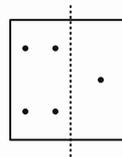
18. [Statistics / Probability]  
List the four possible outcomes when you spin this spinner.



run, hop, jump, skip

19. [Problem Solving 1]  
The sum of two numbers is 10 and their difference is 4. What are the two numbers? 3 and 7

20. [Problem Solving 2]  
A transparent square sheet has a design inside. The sheet is folded in half along the dots.



Which image will appear after folding?

- A) B) C) A

21. [Problem Solving 3]  
Fill in the missing digits.

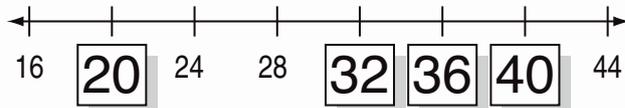
$$\begin{array}{r} \boxed{2} \quad 1 \\ + \quad 4 \quad \boxed{5} \\ \hline 6 \quad 6 \end{array}$$



Name: .....

1. [Counting]

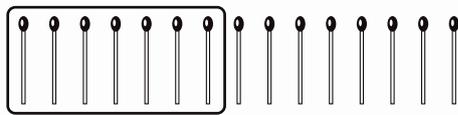
Complete the number line.



6. [× Whole Numbers]

$$\begin{array}{r} 9 \\ \times 9 \\ \hline 81 \end{array}$$

2. [Addition / Subtraction]



$$7 + 8 = 15 \quad 15 - 7 = 8$$

7. [÷ Whole Numbers]

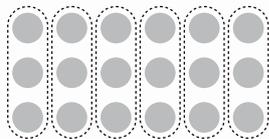
$$15 \div 3 = 5$$

8. [Word Problems]

A spider has 8 legs. A group of spiders has 24 legs. How many spiders are in the group?  
[Write the number sentence.]

$$24 \div 8 = 3$$

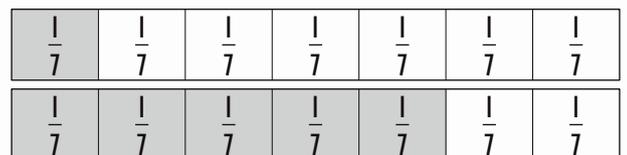
3. [Multiplication / Division]



$$3 \times 6 = 18 \quad 18 \div 6 = 3$$

9. [Fractions]

Use  $<$ ,  $=$  or  $>$  to make this true.



$$\frac{1}{7} < \frac{5}{7}$$

4. [+ Whole Numbers]

	12	14	20	17	11
+ 9	21	23	29	26	20

10. [Place Value]

Place in order from smallest to largest:

675, 576, 756, 76, 657

$$76, 576, 657, 675, 756$$

5. [- Whole Numbers]

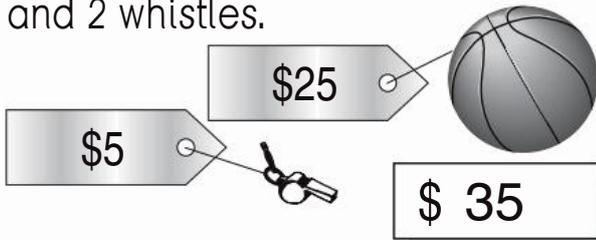
$$\begin{array}{r} 251 \\ - 137 \\ \hline 114 \end{array}$$

11. [Word Numbers]

Write the number 9031 in words.

nine thousand and thirty-one

12. [Money]  
Calculate the cost of 1 basketball and 2 whistles.

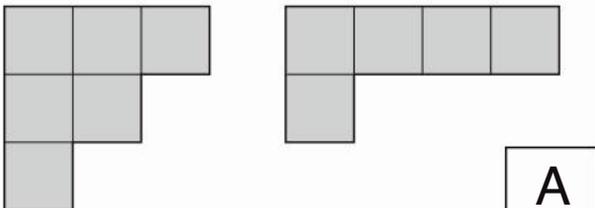


13. [Number Patterns]  
10, 9, 7, 6, 4, **3, 1**

14. [Time]  
Write the time 12:45 in words.  
**twelve forty-five**

15. [Measuring] **OR a quarter to one**  
The shapes below have the same:

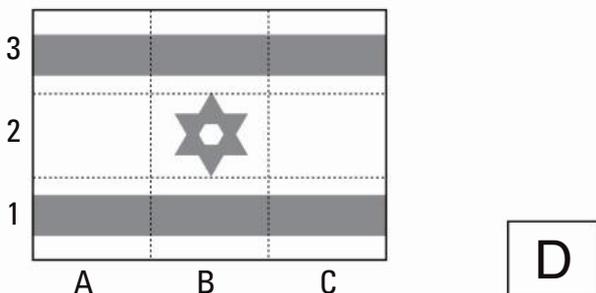
- A) perimeter  
B) area  
C) perimeter and area



16. [Shapes]  
Which angle is a right angle?  
A) B) C)   
**A**

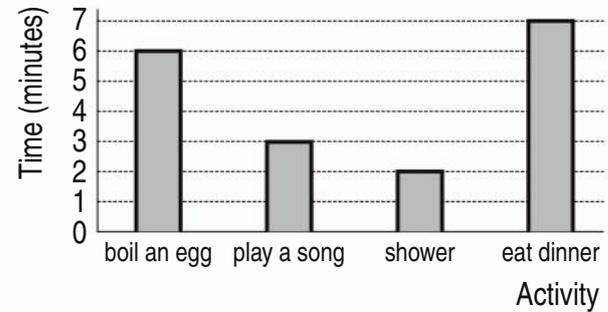
17. [Location]  
In which position is the 'Star of David' on the flag of Israel?

- A) A2 B) B3 C) C1 D) B2

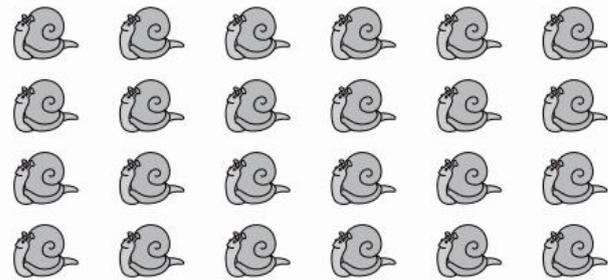


18. [Statistics / Probability]  
Use the table to complete the graph.

Time spent			
Activity	Minutes	Activity	Minutes
boil an egg	6	shower	2
play a song	3	eat dinner	7



19. [Problem Solving 1]  
Joe counted the snails by 6s.



How many snails were left over when Trish counted them by 5s?

**4**

20. [Problem Solving 2]  
A red fox is 50 cm long, not including its tail and 82 cm including its tail. How long is the tail?  
**32 cm**

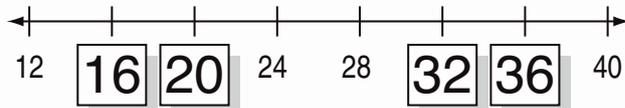
21. [Problem Solving 3]  
If  $10 \times 4 = 40$ , then  
 $13 \times 4 =$  **52**



Name: .....

1. [Counting]

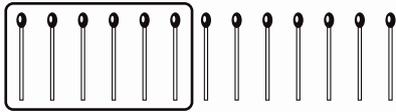
Complete the number line.



6. [× Whole Numbers]

$$\begin{array}{r} 7 \\ \times 7 \\ \hline 49 \end{array}$$

2. [Addition / Subtraction]

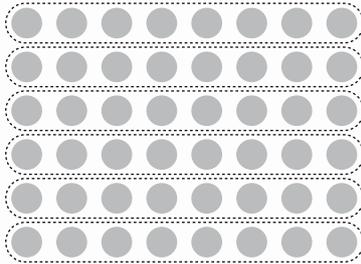


$6 + 7 = 13 \quad 13 - 6 = 7$

7. [÷ Whole Numbers]

$24 \div 4 = 6$

3. [Multiplication / Division]



$6 \times 8 = 48 \quad 48 \div 6 = 8$

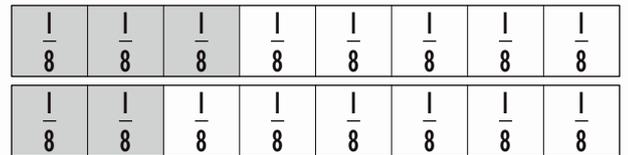
8. [Word Problems]

A centipede has 30 legs. How many pairs of legs does this equal? [Write the number sentence.]

$30 \div 2 = 15$

9. [Fractions]

Use  $<$ ,  $=$  or  $>$  to make this true.



$\frac{3}{8} > \frac{2}{8}$

4. [+ Whole Numbers]

	7	13	18	21	15
+ 9	16	22	27	30	24

10. [Place Value]

Place in order from smallest to largest:

903, 309, 93, 390, 900

$93, 309, 390, 900, 903$

5. [- Whole Numbers]

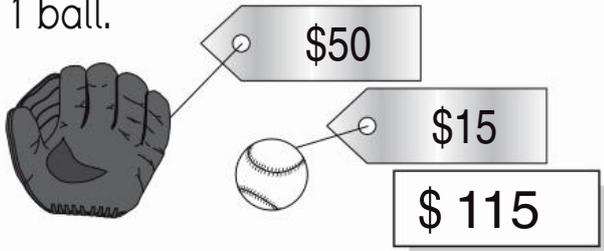
$$\begin{array}{r} 519 \\ - 324 \\ \hline 195 \end{array}$$

11. [Word Numbers]

Write the number 8070 in words.

eight thousand and seventy

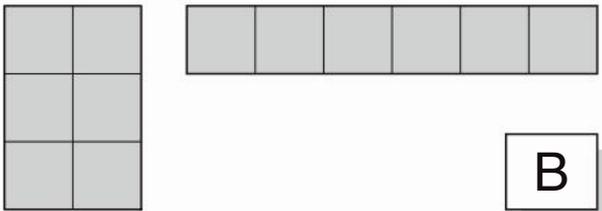
12. [Money]  
Calculate the cost of 2 mitts and 1 ball.



13. [Number Patterns]  
12, 11, 9, 8, 6, 5, 3

14. [Time]  
Write the time 2:10 in words.  
two ten

15. [Measuring] OR ten past two  
The shapes below have the same:  
A) perimeter  
B) area  
C) perimeter and area



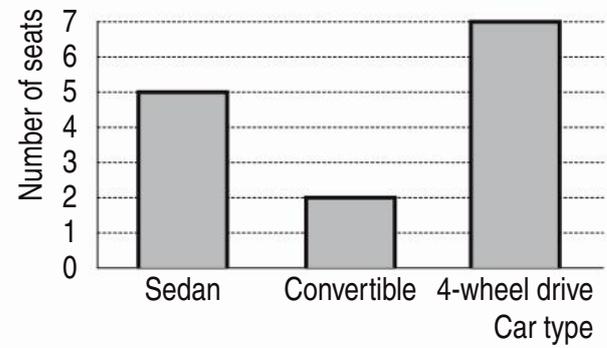
16. [Shapes]  
Which angle is a straight angle?  
A) B) C)   
B

17. [Location]  
In which position is the 'Chakra' wheel on the flag of India?  
A) B2    B) C1    C) C2    D) A3
- 
- A

18. [Statistics / Probability]  
Use the table to complete the graph.

**Number of car seats**

Car type	Number of seats
Sedan	5
Convertible	2
4-wheel drive	7



19. [Problem Solving 1]  
John counted the caps by 5s.  
  
How many caps were left over when Wilma counted them by 4s?  
3

20. [Problem Solving 2]  
A lemur is 50 cm long, not including its tail and 109 cm including its tail. How long is the tail?  
59 cm

21. [Problem Solving 3]  
If  $10 \times 5 = 50$ , then  
 $13 \times 5 =$  65

# MATHS MATE



## Teacher Resource



### **Teacher's Guide to the Use of Maths Mate**

pages i - viii



### **Student Workbook Answers**

pages 3 - 72



### **Student Workbook Short Answers**

pages 1 - 8



### **Problem Solving Hints & Solutions**

pages 1 - 19



### **Test Masters**

pages 1 - 32



### **Test Answers**

pages 1 - 32



### **Record Keeping Sheets**

pages 1 - 10



# MATHS MATE



Name: .....

Class: .....

Teacher: .....

## Worksheet Results

**Term 1**

Sheet 1	Sheet 2	Sheet 3	Sheet 4	Skill Builder links
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Sheet 5	Sheet 6	Sheet 7	Sheet 8	Skill Builder links
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<b>NUMBER &amp; ALGEBRA</b>	1. [Counting]
	2. [Addition / Subtraction]
	3. [Multiplication / Division]
	4. [+ Whole Numbers]
	5. [- Whole Numbers]
	6. [× Whole Numbers]
	7. [÷ Whole Numbers]
	8. [Word Problems]
	9. [Fractions]
	10. [Place Value]
	11. [Word Numbers]
	12. [Money]
	13. [Number Patterns]

<b>MEASUREMENT &amp; SPACE</b>	14. [Time]
	15. [Measuring]

<b>S &amp; P</b>	16. [Shapes]
	17. [Location]

<b>S &amp; P</b>	18. [Statistics / Probability]
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<b>PROBLEM SOLVING</b>	19. [Problem Solving 1]
	20. [Problem Solving 2]
	21. [Problem Solving 3]

1	1	1	1	1.1
2	2	2	2	2.1,11
3	3	3	3	3.1,10
4	4	4	4	4.1
5	5	5	5	5.1
6	6	6	6	6.1
7	7	7	7	7.1
8	8	8	8	8.1
9	9	9	9	9.1
10	10	10	10	10.1
11	11	11	11	11.1
12	12	12	12	12.1
13	13	13	13	13.1
14	14	14	14	14.1
15	15	15	15	15.1
16	16	16	16	16.1
17	17	17	17	17.1
18	18	18	18	18.1
19	19	19	19	Hints & Solutions
20	20	20	20	Hints & Solutions
21	21	21	21	Hints & Solutions
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

1	1	1	1	1.2,3
2	2	2	2	2.2,3
3	3	3	3	3.2,11
4	4	4	4	4.2,3,4,5,6
5	5	5	5	5.2,3,4,5,6
6	6	6	6	6.2,5
7	7	7	7	7.2
8	8	8	8	8.2
9	9	9	9	9.2,3
10	10	10	10	10.2
11	11	11	11	11.2
12	12	12	12	12.2
13	13	13	13	13.2
14	14	14	14	14.2
15	15	15	15	15.2,3
16	16	16	16	16.2
17	17	17	17	17.2,3
18	18	18	18	18.2
19	19	19	19	Hints & Solutions
20	20	20	20	Hints & Solutions
21	21	21	21	Hints & Solutions
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

**Total Correct**

# MATHS MATE



Name: .....

Class: .....

Teacher: .....

## Worksheet Results

**Term 2**

	Sheet 1	Sheet 2	Sheet 3	Sheet 4	Skill Builder links	Sheet 5	Sheet 6	Sheet 7	Sheet 8	Skill Builder links
1. [Counting]	1	1	1	1	1.4	1	1	1	1	1.5
2. [Addition / Subtraction]	2	2	2	2	2.5,12	2	2	2	2	2.6,13
3. [Multiplication / Division]	3	3	3	3	3.3,12	3	3	3	3	3.4,13
4. [+ Whole Numbers]	4	4	4	4	4.2,3,4,5,6	4	4	4	4	4.7
5. [- Whole Numbers]	5	5	5	5	5.7	5	5	5	5	5.2,3,4,5,6
6. [× Whole Numbers]	6	6	6	6	6.2,3,4,5	6	6	6	6	6.2,5
7. [+÷ Whole Numbers]	7	7	7	7	7.3	7	7	7	7	7.3
8. [Word Problems]	8	8	8	8	8.3	8	8	8	8	8.4
9. [Fractions]	9	9	9	9	9.4	9	9	9	9	9.5,6,7
10. [Place Value]	10	10	10	10	10.3,4	10	10	10	10	10.5
11. [Word Numbers]	11	11	11	11	11.1,2	11	11	11	11	11.1,3
12. [Money]	12	12	12	12	12.3	12	12	12	12	12.4
13. [Number Patterns]	13	13	13	13	13.1	13	13	13	13	13.2
14. [Time]	14	14	14	14	14.3	14	14	14	14	14.4
15. [Measuring]	15	15	15	15	15.4	15	15	15	15	15.5
16. [Shapes]	16	16	16	16	16.3	16	16	16	16	16.4
17. [Location]	17	17	17	17	17.4	17	17	17	17	17.5
18. [Statistics / Probability]	18	18	18	18	18.3	18	18	18	18	18.4
19. [Problem Solving 1]	19	19	19	19	Hints & Solutions	19	19	19	19	Hints & Solutions
20. [Problem Solving 2]	20	20	20	20	Hints & Solutions	20	20	20	20	Hints & Solutions
21. [Problem Solving 3]	21	21	21	21	Hints & Solutions	21	21	21	21	Hints & Solutions
<b>Total Correct</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

NUMBER & ALGEBRA

MEASUREMENT & SPACE

S & P

PROBLEM SOLVING

# MATHS MATE



Name: .....

Class: .....

Teacher: .....

## Worksheet Results

**Term 3**

Sheet 1	Sheet 2	Sheet 3	Sheet 4	Skill Builder links
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Sheet 5	Sheet 6	Sheet 7	Sheet 8	Skill Builder links
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<b>NUMBER &amp; ALGEBRA</b>	1. [Counting]
	2. [Addition / Subtraction]
	3. [Multiplication / Division]
	4. [+ Whole Numbers]
	5. [- Whole Numbers]
	6. [× Whole Numbers]
	7. [÷ Whole Numbers]
	8. [Word Problems]
	9. [Fractions]
	10. [Place Value]
	11. [Word Numbers]
	12. [Money]
	13. [Number Patterns]
<b>MEASUREMENT &amp; SPACE</b>	14. [Time]
	15. [Measuring]
<b>S &amp; P</b>	16. [Shapes]
	17. [Location]
<b>PROBLEM SOLVING</b>	18. [Statistics / Probability]
	19. [Problem Solving 1]
	20. [Problem Solving 2]
	21. [Problem Solving 3]
<b>Total Correct</b>	

1	1	1	1	1.6
2	2	2	2	2.14
3	3	3	3	3.5,6
4	4	4	4	4.8
5	5	5	5	5.8
6	6	6	6	6.7
7	7	7	7	7.3
8	8	8	8	8.1,2,3,4
9	9	9	9	9.2
10	10	10	10	10.6,7
11	11	11	11	11.1
12	12	12	12	12.5
13	13	13	13	13.1
14	14	14	14	14.5
15	15	15	15	15.6,7
16	16	16	16	16.5
17	17	17	17	17.6
18	18	18	18	18.1
19	19	19	19	Hints & Solutions
20	20	20	20	Hints & Solutions
21	21	21	21	Hints & Solutions
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

1	1	1	1	1.7
2	2	2	2	2.7,12
3	3	3	3	3.7,14
4	4	4	4	4.9
5	5	5	5	5.8
6	6	6	6	6.8
7	7	7	7	7.3
8	8	8	8	8.1,2,3,4
9	9	9	9	9.8
10	10	10	10	10.8
11	11	11	11	11.3
12	12	12	12	12.6
13	13	13	13	13.2
14	14	14	14	14.6
15	15	15	15	15.8
16	16	16	16	16.6
17	17	17	17	17.7,8
18	18	18	18	18.2
19	19	19	19	Hints & Solutions
20	20	20	20	Hints & Solutions
21	21	21	21	Hints & Solutions
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

# MATHS MATE



Name: .....

Class: .....

Teacher: .....

## Worksheet Results

**Term 4**

	Sheet 1	Sheet 2	Sheet 3	Sheet 4	Skill Builder links	Sheet 5	Sheet 6	Sheet 7	Sheet 8	Skill Builder links
1. [Counting]	1	1	1	1	1.8	1	1	1	1	1.9
2. [Addition / Subtraction]	2	2	2	2	2.8,15	2	2	2	2	2.9,16
3. [Multiplication / Division]	3	3	3	3	3.3,15	3	3	3	3	3.17
4. [+ Whole Numbers]	4	4	4	4	4.9	4	4	4	4	4.2,3,4,5,6
5. [- Whole Numbers]	5	5	5	5	5.2,3,4,5,6	5	5	5	5	5.9
6. [× Whole Numbers]	6	6	6	6	6.8	6	6	6	6	6.8
7. [÷ Whole Numbers]	7	7	7	7	7.4	7	7	7	7	7.5
8. [Word Problems]	8	8	8	8	8.1,2,3,4	8	8	8	8	8.1,2,3,4
9. [Fractions]	9	9	9	9	9.9	9	9	9	9	9.10
10. [Place Value]	10	10	10	10	10.9	10	10	10	10	10.10
11. [Word Numbers]	11	11	11	11	11.1	11	11	11	11	11.4
12. [Money]	12	12	12	12	12.7	12	12	12	12	12.8
13. [Number Patterns]	13	13	13	13	13.3	13	13	13	13	13.4
14. [Time]	14	14	14	14	14.6	14	14	14	14	14.7
15. [Measuring]	15	15	15	15	15.9	15	15	15	15	15.9
16. [Shapes]	16	16	16	16	16.7	16	16	16	16	16.8,9
17. [Location]	17	17	17	17	17.9	17	17	17	17	17.9
18. [Statistics / Probability]	18	18	18	18	18.7,8	18	18	18	18	18.9
19. [Problem Solving 1]	19	19	19	19	Hints & Solutions	19	19	19	19	Hints & Solutions
20. [Problem Solving 2]	20	20	20	20	Hints & Solutions	20	20	20	20	Hints & Solutions
21. [Problem Solving 3]	21	21	21	21	Hints & Solutions	21	21	21	21	Hints & Solutions
<b>Total Correct</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

NUMBER & ALGEBRA

MEASUREMENT & SPACE

S & P

PROBLEM SOLVING

# MATHS MATE



Name: .....

Class: .....

Teacher: .....

## Test Results

Test 1    Test 2    Test 3    Test 4

Test 5    Test 6    Test 7    Test 8

NUMBER & ALGEBRA

1. [Counting]
2. [Addition / Subtraction]
3. [Multiplication / Division]
4. [+ Whole Numbers]
5. [- Whole Numbers]
6. [× Whole Numbers]
7. [÷ Whole Numbers]
8. [Word Problems]
9. [Fractions]
10. [Place Value]
11. [Word Numbers]
12. [Money]
13. [Number Patterns]

MEASUREMENT & SPACE

14. [Time]
15. [Measuring]
16. [Shapes]
17. [Location]

S & P

18. [Statistics / Probability]

PROBLEM SOLVING

19. [Problem Solving 1]
20. [Problem Solving 2]
21. [Problem Solving 3]

1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21

1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21

**Total Correct**

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Class: .....

Teacher: .....

Worksheet Number	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8
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✓ - Signed by parent      L - Work handed in late      x - Not signed by parent



Class: .....

Teacher: .....

Worksheet Number	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8
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34								

✓ - Signed by parent

L - Work handed in late

✗ - Not signed by parent



Class: .....

Teacher: .....

Worksheet Number	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8
1								
2								
3								
4								
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✓ - Signed by parent      L - Work handed in late      x - Not signed by parent



Class: .....

Teacher: .....

Worksheet Number	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8
1								
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✓ - Signed by parent

L - Work handed in late

✗ - Not signed by parent