



OzzieMaths
Series



Maths: Year 1



- ✓ number and algebra
- ✓ fractions, decimals and money
- ✓ patterns and algebra
- ✓ shapes and units of measurement
- ✓ location and transformation
- ✓ chance and data

By Anita Green

Sample



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Teachers' Notes

This book is part of a series containing a range of maths activities linked to the Australian Curriculum. Each activity is linked to a content description and elaboration.

Many of the questions and activities in the book are designed to be open-ended, however where appropriate, answers or suggested answers are provided. The idea of keeping the questions and activities open-ended is to focus on processes and strategies and allow for greater differentiation. The activities enable all students of different abilities to be working on the same problem at any one time, but allow students to tackle the problem at different levels.

To get the most out of these activities, reflection time needs to be incorporated into each lesson. This doesn't need to be just at the end of the lesson but can be at various times throughout the lesson too. This gives the students time to share their strategies with the class and see how other students are solving the same problems. It's important for students to see that they all might have the right answer but there are many ways to get to that answer. Offering students this time means they can learn from each other and provides assistance to those students who might be struggling by giving them a strategy to try.

The book is divided into six sections:

- Section 1: Number And Place Value**
- Section 2: Fractions, Decimals And Money**
- Section 3: Patterns And Algebra**
- Section 4: Shapes And Units And Measurement**
- Section 5: Location And Transformation**
- Section 6: Chance And Data**

As teachers, the questions we ask can help the students delve deeper and think more critically about their learning. Try using some of these questions in your lessons:

1. Is there another way you could work that out?
2. Have you found every possible answer?
3. What would happen if ... ?
4. Is there a pattern?
5. You and ... have different answers... who is right?
6. You and ... have the same answer but different working out. Share with each other what you did.
7. Can you prove it?

With the help of this book, you can ensure that you are covering each area of the curriculum and make maths fun and engaging for your students.

Curriculum Links

Number And Algebra

Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by twos, fives and tens starting from zero (ACMNA012)

- Elaboration: developing fluency with forwards and backwards counting in meaningful contexts such as circle games

Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line (ACMNA013)

- Elaboration: modelling numbers with a range of material and images
- Elaboration: identifying numbers that are represented on a number line and placing numbers on a prepared number line

Count collections to 100 by partitioning numbers using place value (ACMNA014)

- Elaboration: understanding partitioning of numbers and the importance of grouping in tens. Understanding two-digit numbers as comprised of tens and ones/units

Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts (ACMNA015)

- Elaboration: developing a range of mental strategies for addition and subtraction problems

Fractions, Decimals and Money

Recognise, describe and order Australian coins according to their value (ACMNA017)

- Elaboration: understanding the value of Australian coins is not limited to size; describing the features of coins that make it possible to identify them

Recognise and describe one-half as one of two equal parts of a whole (ACMNA016)

- Elaboration: splitting an object into two equal pieces and describing how the pieces are equal
- Elaboration: sharing a collection of readily available materials into two equal portion

Patterns and Algebra

Investigate and describe number patterns formed by skip-counting and patterns with objects (ACMNA018)

- Elaboration: using place-value patterns beyond the teens to generalise the number sequence and predict the next number; investigating patterns in the number system, such as the occurrence of a particular digit in the numbers to 100

Shapes And Units of Measurement

Measure and compare the lengths and capacities of pairs of objects using uniform informal units (ACMMG019)

- Elaboration: understanding that in order to compare objects, the unit of measurement must be the same size

Tell time to the half-hour (ACMMG020)

- Elaboration: reading time on analogue and digital clocks and observing the characteristics of half-hour times

Describe duration using months, weeks, days and hours (ACMMG021)

- Elaboration: describing the duration of familiar situations such as 'how long is it until we next come to school?'

Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features (ACMMG022)

- Elaboration: focusing on geometric features and describing shapes and objects using everyday words such as 'corners', 'edges' and 'faces'

Location And Transformation

Give and follow directions to familiar locations (ACMMG023)

- Elaboration: understanding that people need to give and follow directions to and from a place, and that this involves turns, direction and distance
- Elaboration: understanding the meaning and importance of words such as 'clockwise', 'anticlockwise', 'forward' and 'under' when giving and following directions

Chance And Data

Identify outcomes of familiar events involving chance and describe them using everyday language such as 'will happen', 'won't happen' or 'might happen' (ACMSP024)

- Elaboration: justifying that some events are certain or impossible

Choose simple questions and gather responses and make simple inferences (ACMSP262)

- Elaboration: determining which questions will gather appropriate responses for a simple investigation

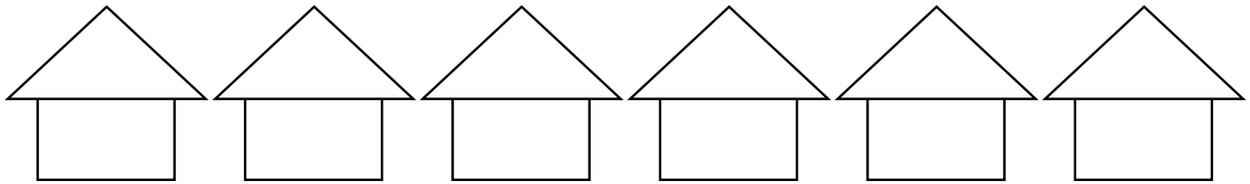
Represent data with objects and drawings where one object or drawing represents one data value. Describe the displays (ACMSP263)

- Elaboration: understanding one-to-one correspondence; describing displays by identifying categories with the greatest or least number of objects

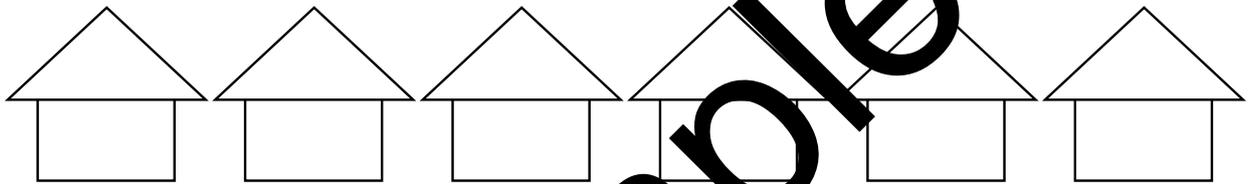
House Patterns

The numbers on the houses in the five streets below make a pattern. Roll a dice to find one of the house numbers in Street 1, then create a pattern using this rolled number. Repeat this for each street. You should end up with 5 different patterns.

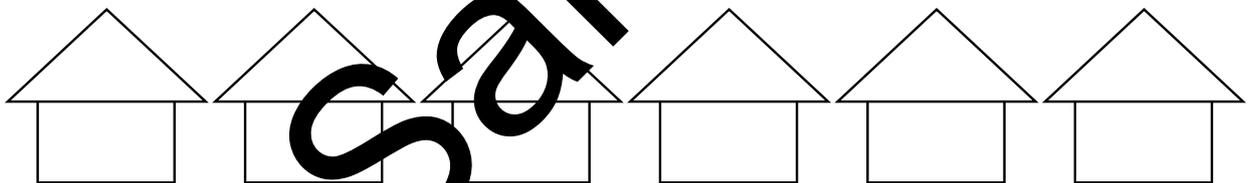
Street 1



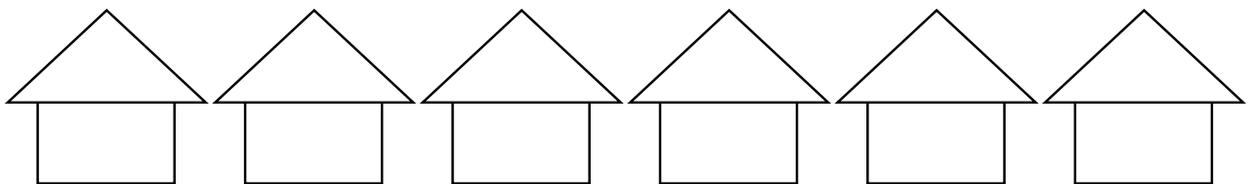
Street 2



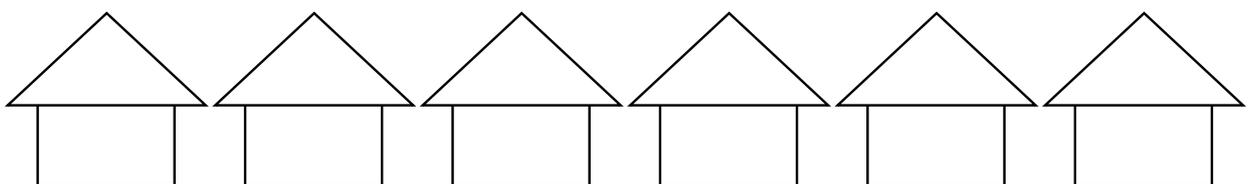
Street 3



Street 4



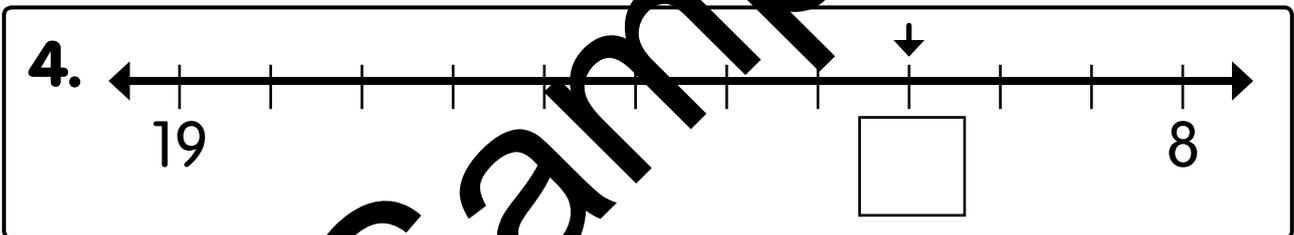
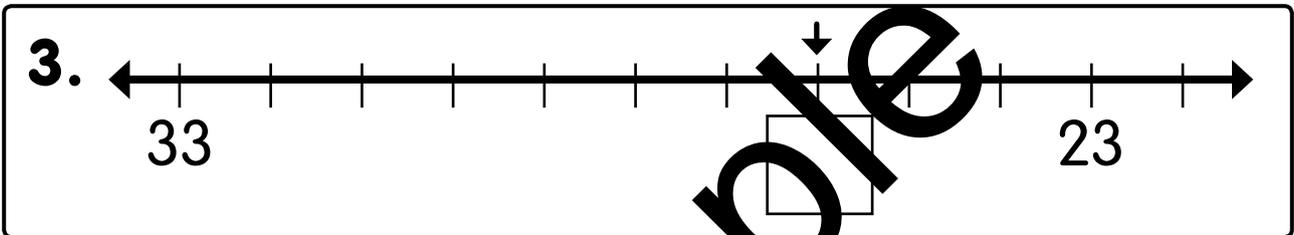
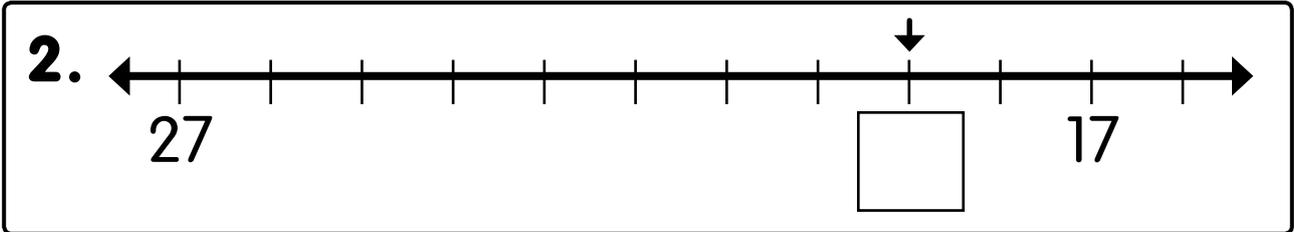
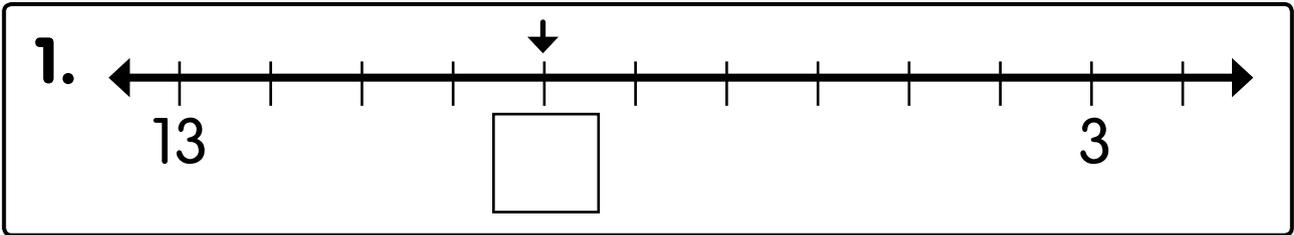
Street 5



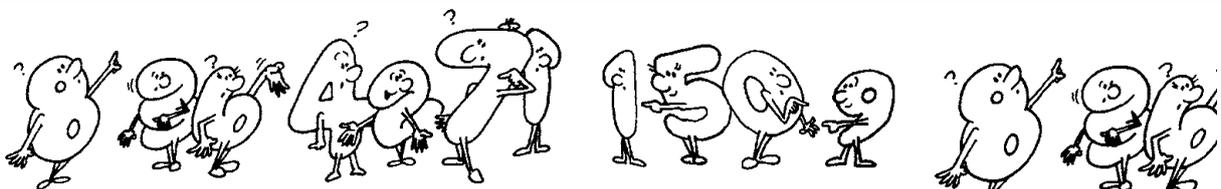
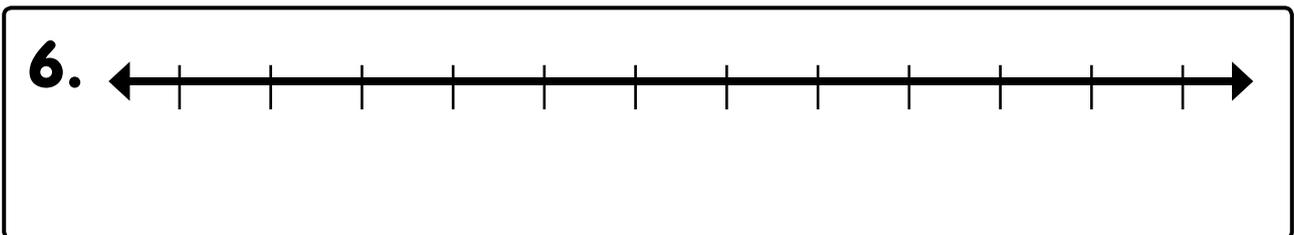
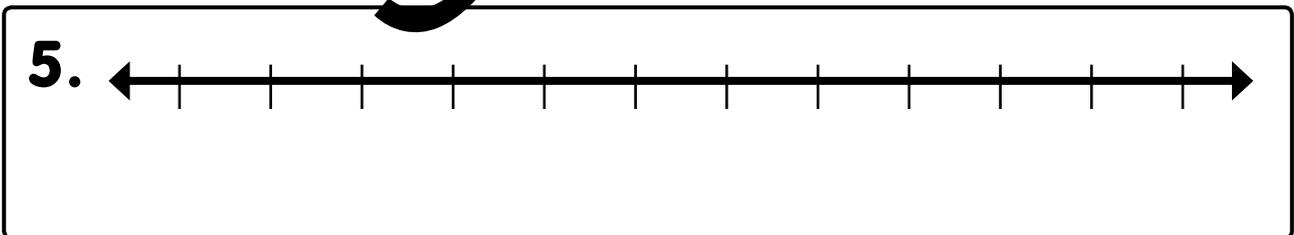
Sample

Number Line Fun 2

What number goes in each box on the number line?

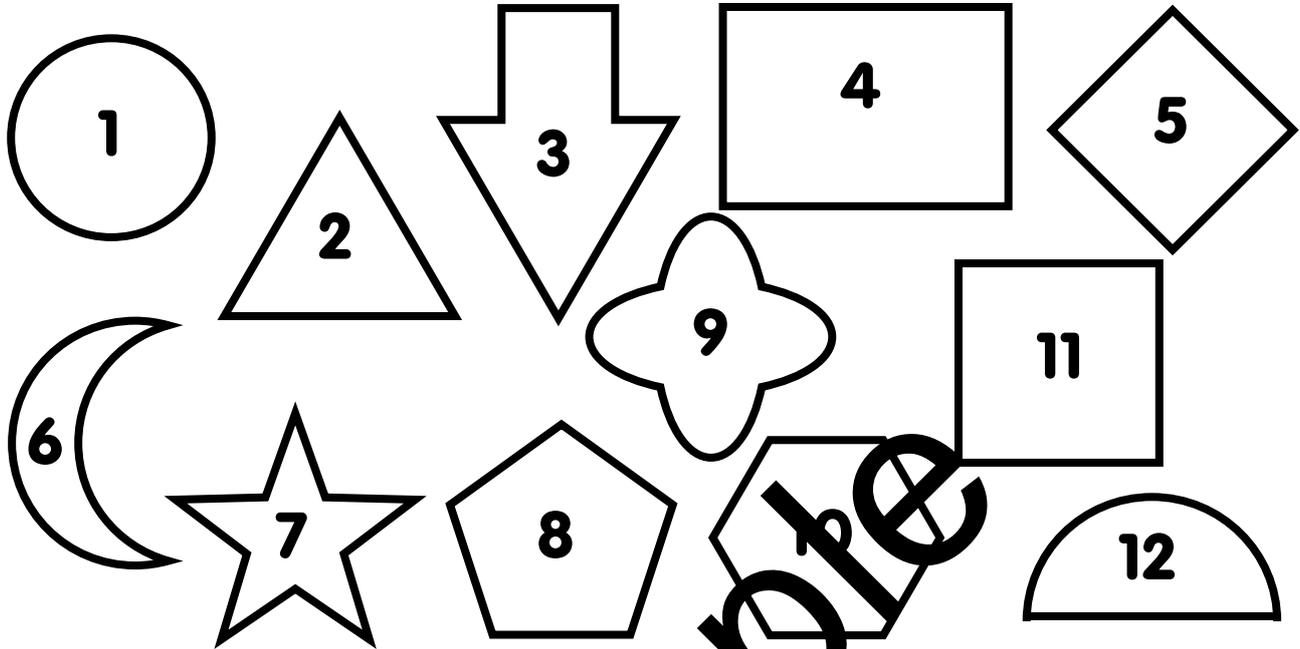


Create two of your own and give them to a friend to try and solve.



Halving Shapes 2

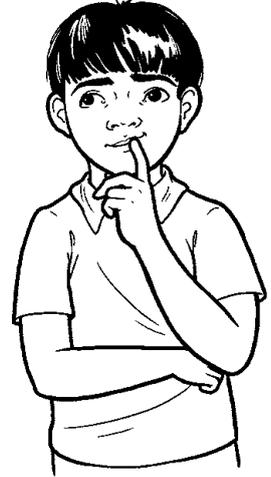
Some shapes can only be cut in half one way. Others have two or more ways that they can be cut in half. Sort these numbered shapes under the correct headings.



Shapes that can be cut in half one way.	Shapes that can be cut in half two or more ways.

Pattern Problems 2

1. How many two-digit numbers can you find that have the same digits in the tens and the ones columns (e.g. 22, 77)?



2. How many two-digit numbers can you make where the digit in the tens place is one more than the digit in the ones place?



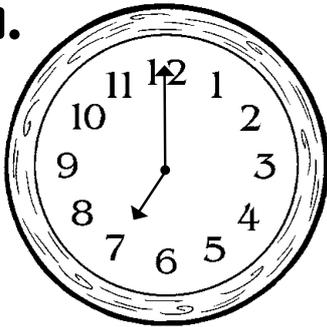
Extra!

How many two-digit numbers can you make where the digit in the tens place is two more than the digit in the ones place (e.g. 42, 86)?

Telling Time 2

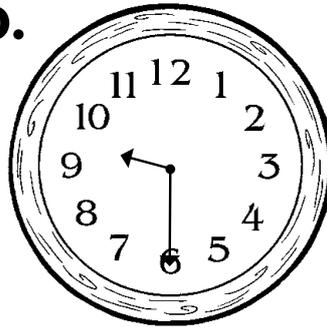
1. What time is it on these clocks?

a.

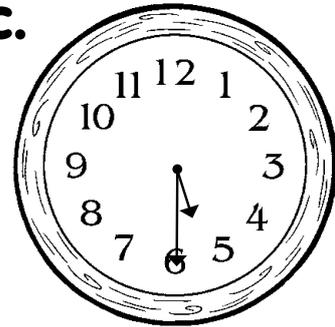


7:00

b.



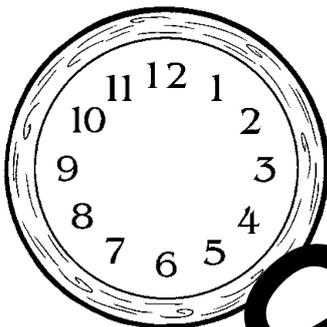
c.



2. Draw these times on the clocks below.

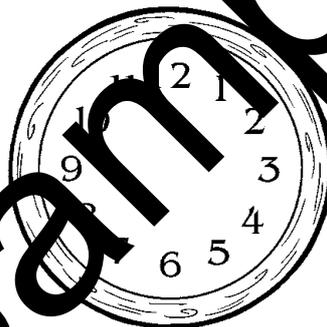
a.

noon



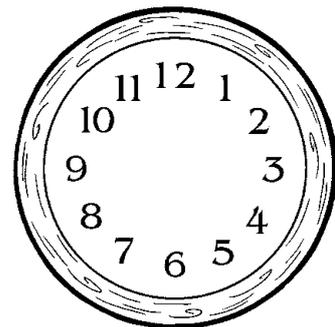
b.

eleven thirty

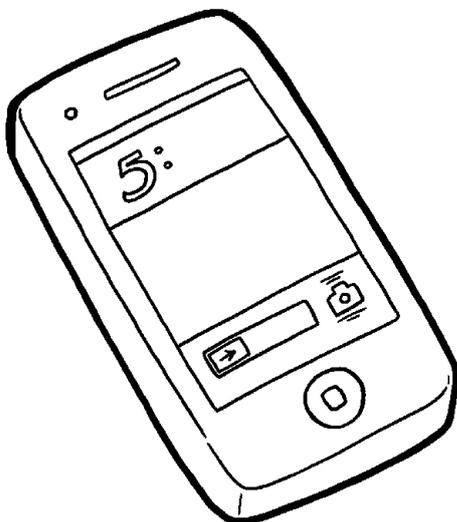


c.

half past 5



3. Write a 'quarter past' time on the mobile below.



4. Draw or write what you would be doing at this time of the day.

Robot Walk 1

Reba the robot has made his way through the grid. Can you describe the path he has taken?

