



**KiwiMaths
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

Teachers' Notes

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

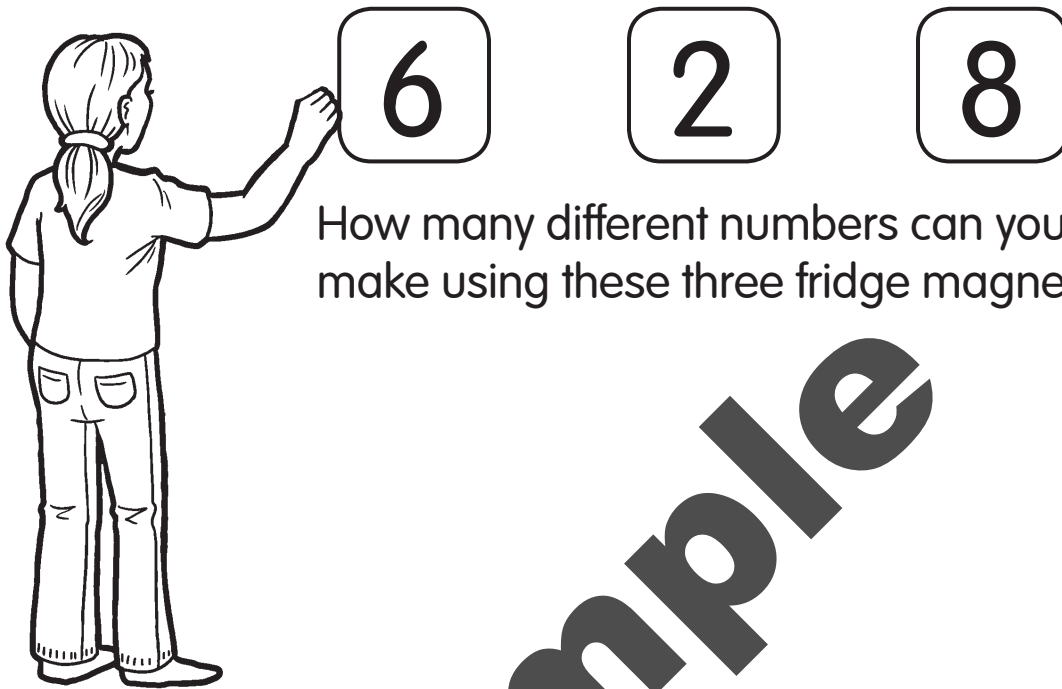
As teachers, the questions we ask can help the students delve deeper and think more critically about their learning. Try using some of these questions in your lessons:

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, and making maths fun and engaging for your students.

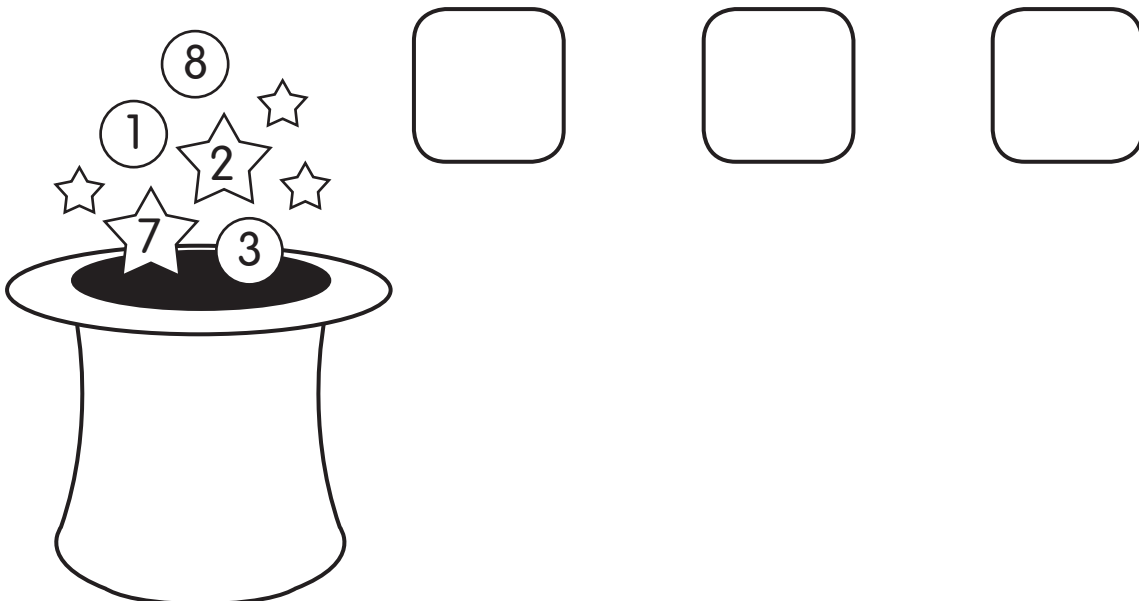
How Many Numbers?

1. Kai's mum is trying to find all the number magnets to put back on the fridge. She is having a bit of trouble finding them all. The only numbers she can find are 6, 2 and 8.



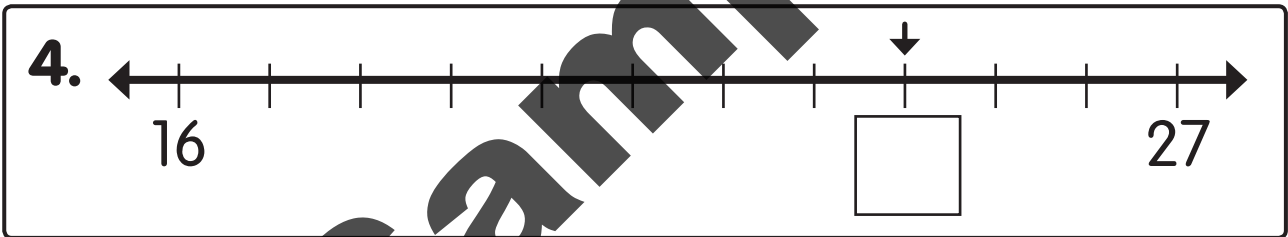
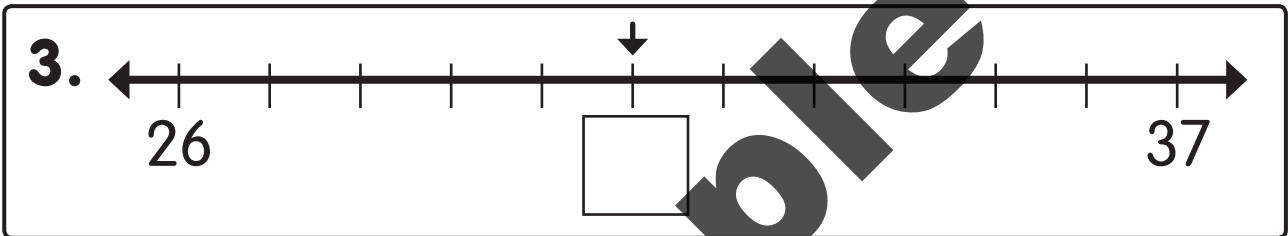
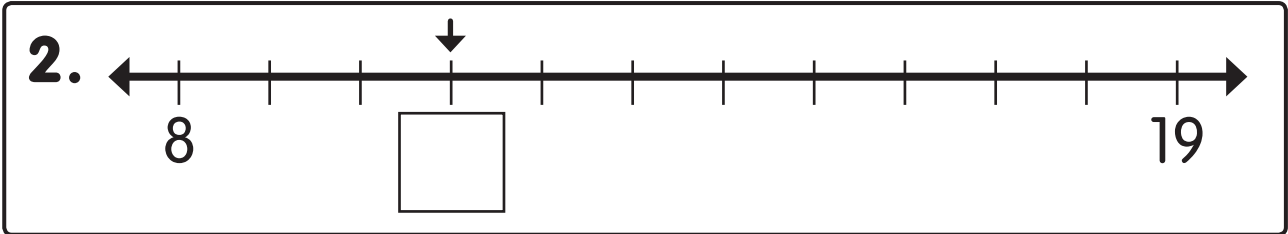
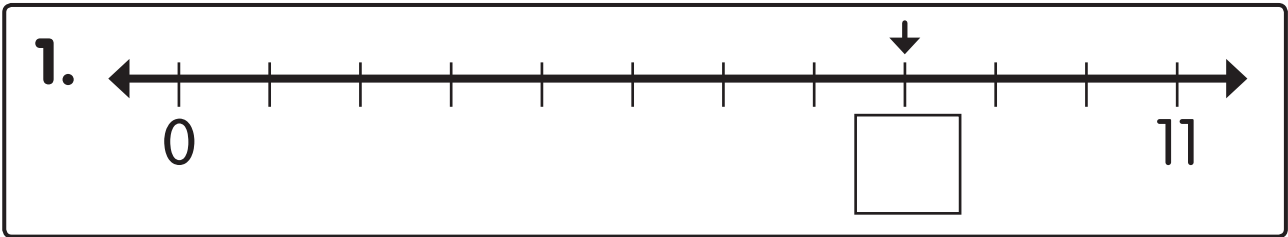
How many different numbers can you make using these three fridge magnets?

2. Pull three numbers out of a hat (or you could use playing cards or dice). Using your three digits, how many different numbers can you make?

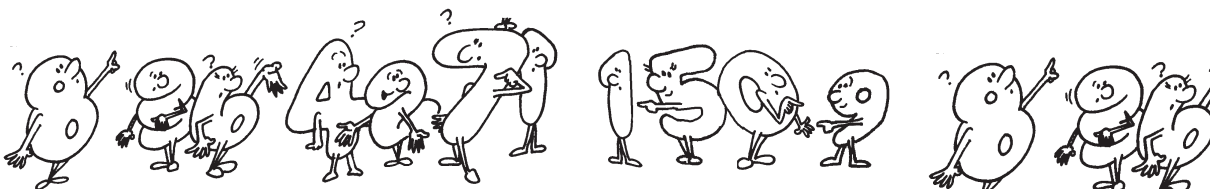
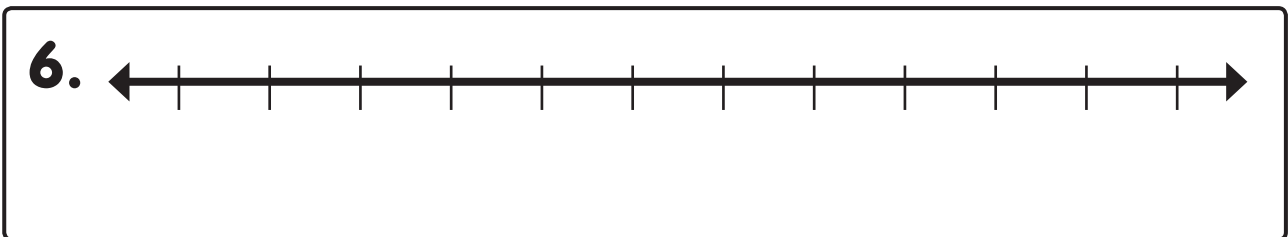
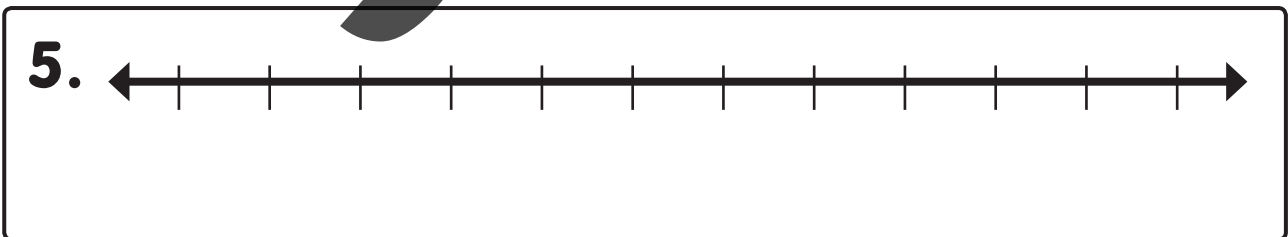


Number Line Fun 1

What number goes in each box on the number line?

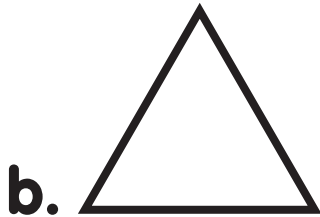
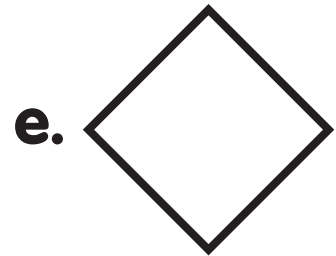
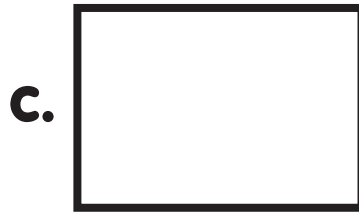
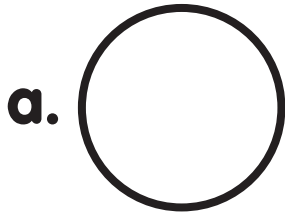


Create two of your own and give them to a friend to try and solve.



Halving Shapes 1

1. Can you use a ruler and a pencil to draw a line through each shape below so it is cut perfectly in half?



2. How do you know that the above shapes have been cut into halves?

3. Draw two shapes of your own, then show different ways that you can cut each one in half.

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)?

Comparing Capacity

Containers 1



1. Circle which container above you think holds the most water.

2. How did you decide which one holds more?

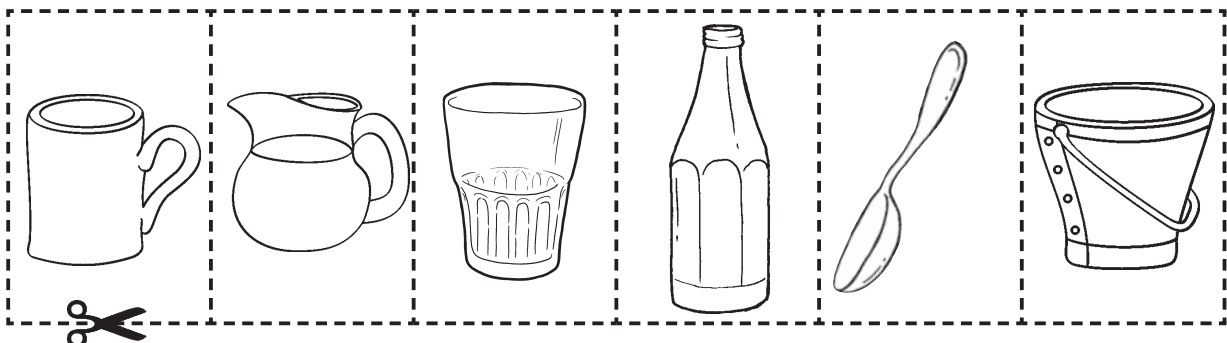
3. How could you find out if you are right?

Containers 2

1. Colour red the container that you think would hold the most liquid.

2. Colour blue the container that you think would hold the least liquid.

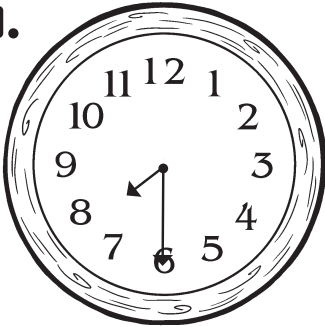
3. Cut out the pictures below and paste them in order from which would hold the most to which would hold the least amount of liquid.



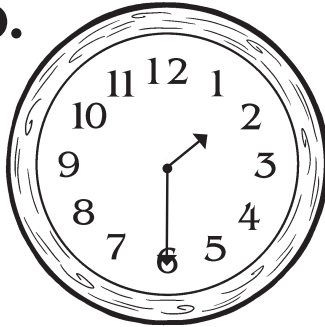
Telling Time 3

1. Match the clocks.

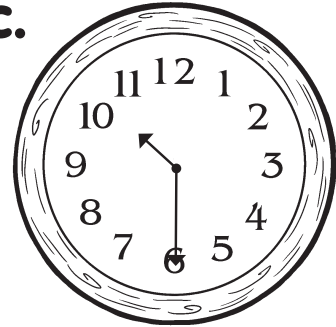
a.



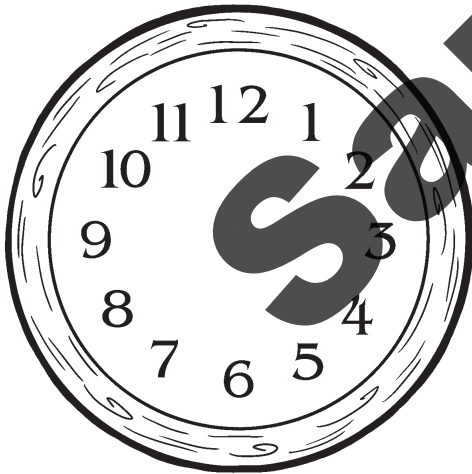
b.



c.



2. Make the time eleven thirty on both the analogue and the digital clock.



3. What can you tell me about the digital and analogue clocks when the time is showing a 'half past' time?
