Ready-Ed Publications

KiwiMaths Series

PHOTOCOPY MASTERS

Maths: Year 4

- number and algebra
- measurement and geometry
- statistics and probability

4

By Lisa Craig

Teachers' Notes

The activities in this book have been designed to develop mathematical skills and reasoning. Creative ways that are often connected to solving problems in real-life contexts are presented. Students will be asked to reflect upon the strategies they use to problem-solve effectively in familiar situations and will begin to recognise that mathematical understanding has an important role in other subject areas. Answers and additional teaching information are included at the back of the book. This book is divided into three sections detailed below.

Section One: Number And Algebra

In this section, students will engage in a variety of activities that require them to demonstrate ever-increasing capability in using mental and written strategies to explore number relationships and patterns. Tasks include: using a number line to solve sequence problems; discovering the connection between even and odd numbers; and calculating change in shopping transactions.

Section Two: Measurement And Geometry

This section draws attention to the value and beauty of mathematics in the world around them. Students will be asked to consider symmetry in Indigenous Australian and Asian art to create their own symmetrical motifs. The skyline of a modern city activity focuses on architecture that incorporates and manipulates 2D shapes. Tasks involving measurement draw on everyday contexts.

Section Three: Statistics And Probability

Students will develop skills in collecting, organising and representing data in this section. The focus is on exploring research questions and evaluating the most appropriate method of collecting and representing data. Probability activities include determining the likeliness of an event occurring and whether or not one event is affected by the occurrence of another.

Which Number Comes Next?

Work with a partner. Cut out the cards. Put them face down on the desk. Take turns picking a card. Discuss and resolve the odd and even situations on the cards.

1 I'm thinking of two numbers. Both of them are even. When I add them together, will the answer be odd or even?

❑odd ❑even

2 I'm thinking of two numbers. One is odd and one is even. When I multiply these numbers together, will the answer be odd or even?

❑odd ❑even

3 I'm thinking of a number. Now I double it. Will the answer be an odd or even number?

❑odd ❑even

4 I'm thinking of two numbers between 1 and 20. Both numbers are odd. Will the difference between them be an odd or even number?

❑odd ❑even

5 I'm thinking of four odd numbers between 1 and 20. If I add them together, will the answer be an odd or even number?

❑odd ❑even

6 I'm thinking of two odd numbers less than 10. When I multiply them, will the answer be an odd or even number?

❑odd ❑even

7 I'm thinking of an odd number between 1 and 50. When I multiply it by ten, will the product be an odd or even number?

❑odd ❑even

8 I'm thinking of three numbers between 10 and 20. All of them are odd. When I add them together, will the answer be odd or even?

❑odd ❑even

9 I'm thinking of an even number between 1 and 20. When I divide this number by two, will the answer be an even or odd number?

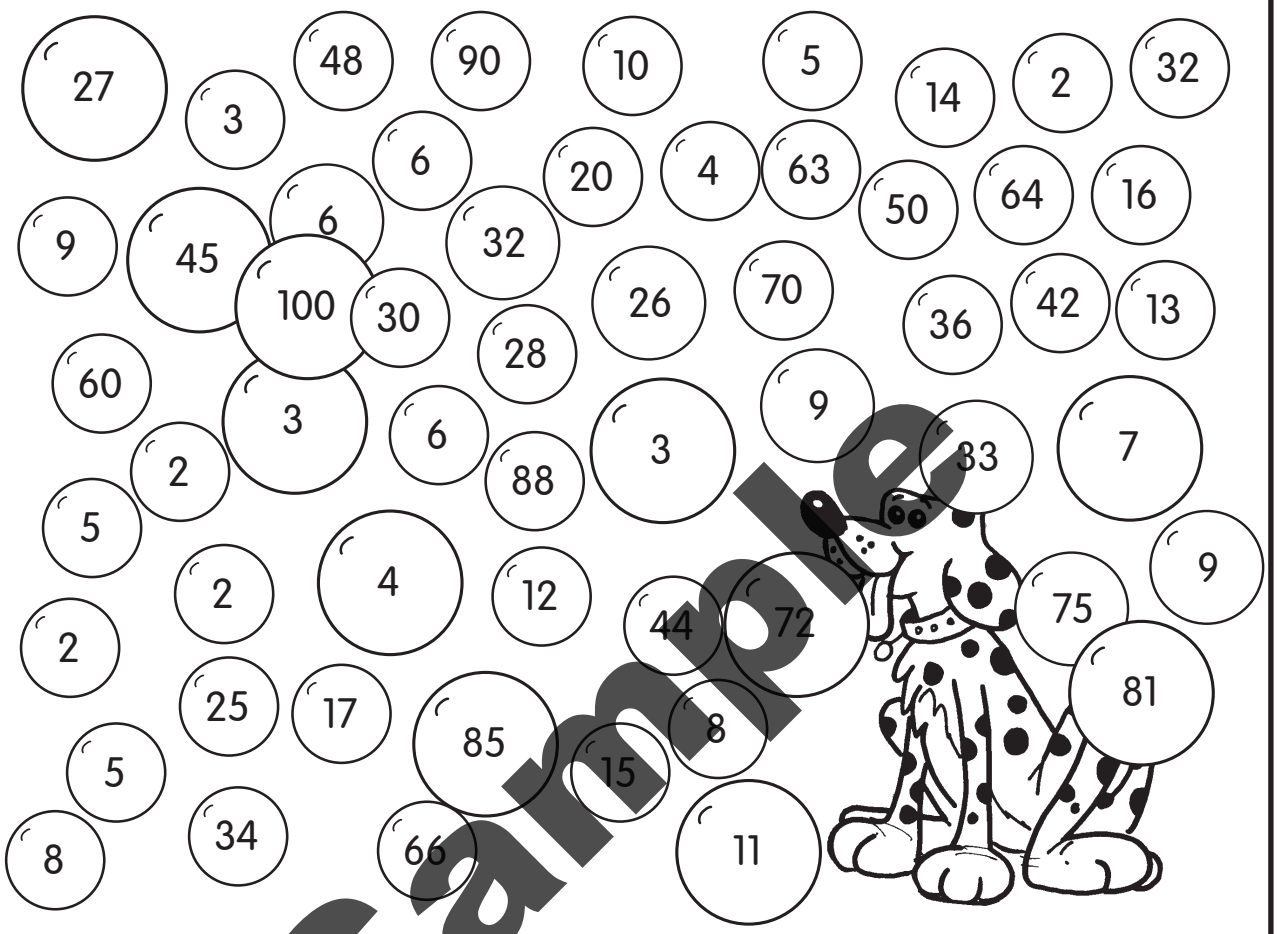
❑odd ❑even

10 If I multiply an odd number between 1 - 10 by itself and then subtract 1, will the answer be an odd or even number?

❑odd ❑even

Division Fetch

Help Magnus fetch balls to make division number sentences. Colour in the three balls that you have used, for example: 32 ÷ 4 = 8. Shaded balls cannot be used again.



My Division Number Sentences

1.	9.
2.	10.
3.	11.
4.	12.
5.	13.
6.	14.
7.	15.
8.	16.

16 division facts = AMAZING!

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Money Moments

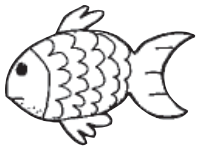
Write number sentences to solve these money matters.

1. A customer buys a fruit smoothie for $3.30, a cheese and pickle sandwich for $3.60 and a $2.20 slice of carrot cake. How much change does he get from a ten dollar note?

2. Dad's berry pavlovas are heavenly. He makes two every year for the school fete. Each pavlova is cut into 10 slices. Each slice is sold for $1.80. How much money does the school take from the sale of Dad's pavlovas?

3. A litre bottle of Crowning Glory hair shampoo is $4.80 more than the 500ml bottle of the same shampoo. The litre bottle costs $18.90. How much does the smaller bottle cost?

4. Marcus has $35.00 pocket money to spend. He spends half his money on his sister's birthday present and he buys a new guppy fish for his aquarium that costs $8.00. How much money does he have left?



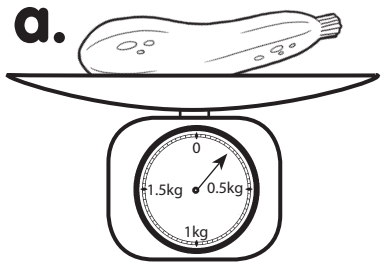
5. After spending $5.30 on a new note book and $2.70 on a metre of satin ribbon, Micaela brings $10.00 change home to her mother. How much did Micaela's mother give her daughter to go shopping?

6. Mr. Snap is mad about photography. He used up 4 rolls of film this week! It costs $9.50 to develop one roll. How much will it cost Mr. Snap to have 5 rolls developed? How much change will he receive if he pays with a $50 note?

Measuring Up 1

1. Read the scales and record the weights of the food items in grams and kilograms.

a.



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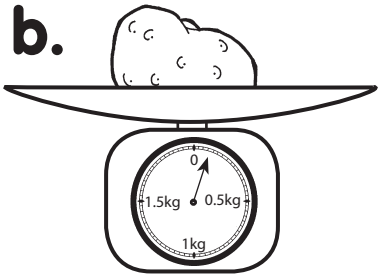

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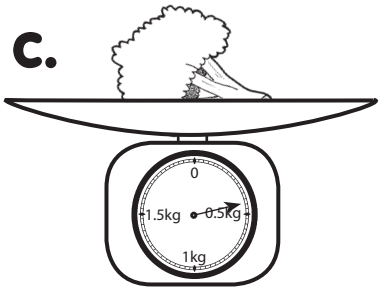
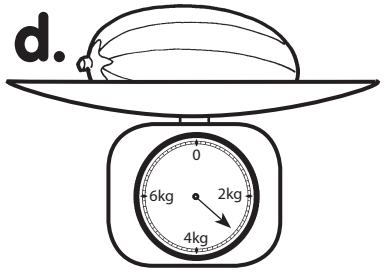


d.



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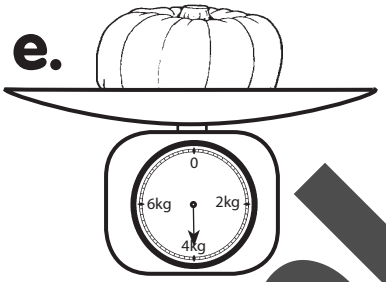

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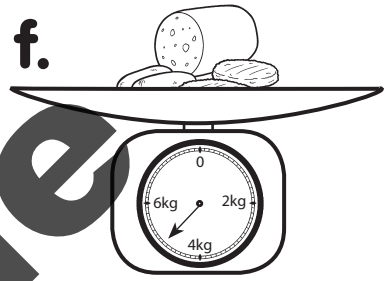
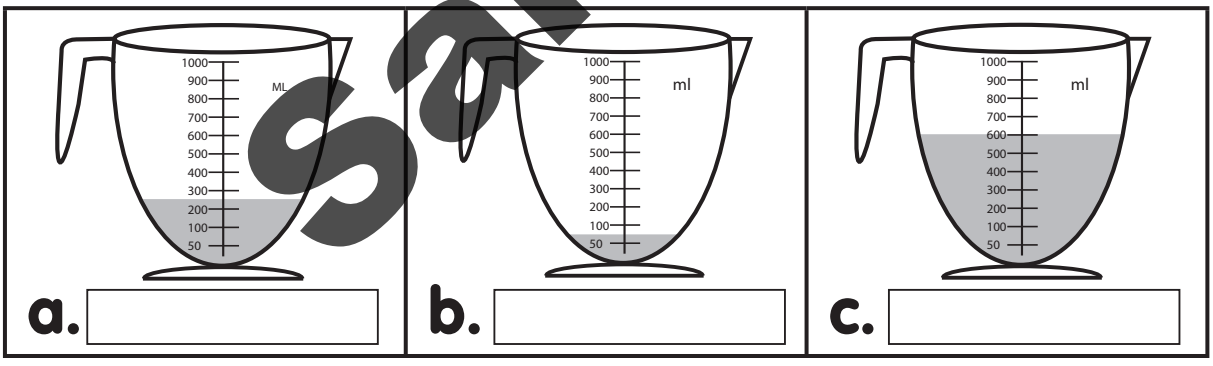
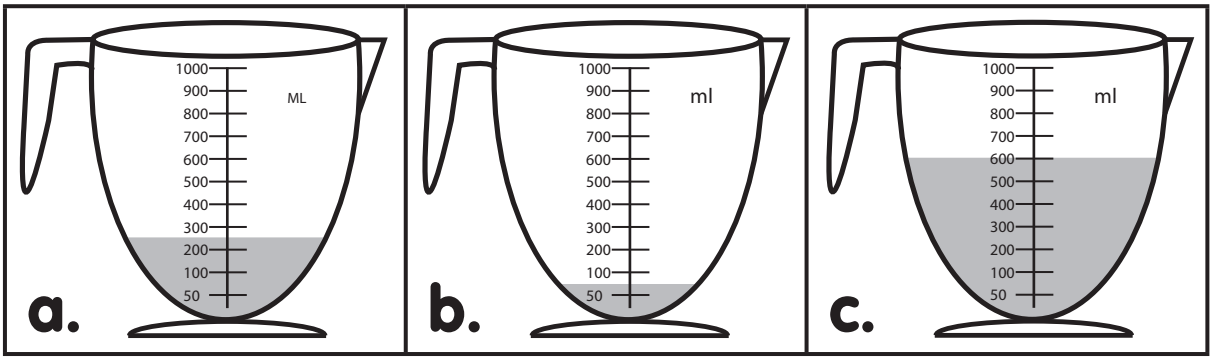


2. Read the measuring cups and record the volume of liquid in each.



a. b. c.

3. Add an additional 150ml to each measuring cup by shading.



a. b. c.

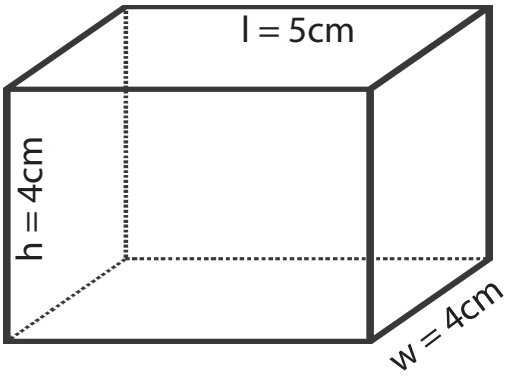
Calculating Volume 1

Volume is the space taken up by a 3D or solid object. The formula for calculating volume is: length (l) x width (w) x height (h). Volume is measured in cubic centimetres and metres (cm^3 and m^3).

Look at the example in the image:

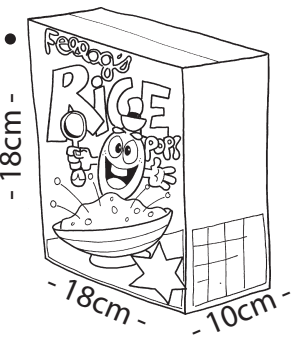
Volume of cuboid = 5cm x 4cm x 3cm

Answer = 60 cm^3



1. Calculate the volumes of these boxes. Show your working out. You can use digital technology to help you with your answers.

a.



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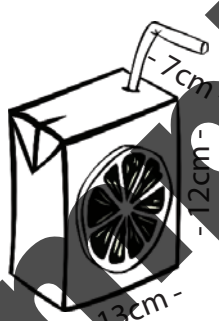
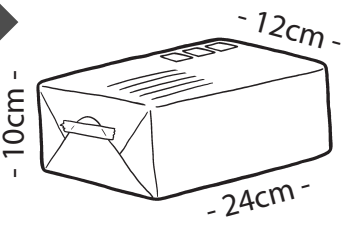


c.



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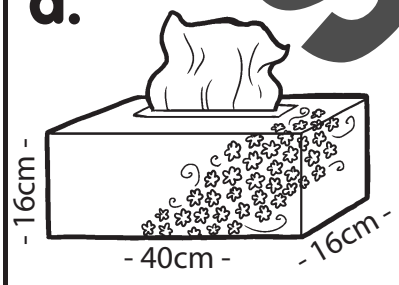

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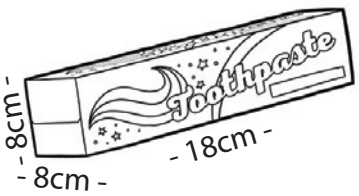


f.

2. Rank the volumes of the packaging from smallest to largest:

On The Data Trail

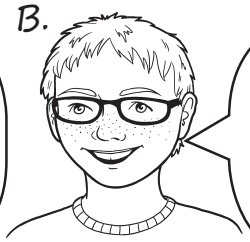
These curious children want to know more about their classmates. Read the questions these children would like answered.

A.

Who's the tallest in the class?

– Meena

B.



How many children were born in March?

– Carl

C.

How do you get to school every day?

– Keira

D.

Who can go the longest without blinking?

– Lachlan

1. Match the collected data to the children's investigation questions. Draw lines to do this.

a. Who's the tallest?	1. Children's dates of birth.
b. Who was born in June?	2. Timing eye movement.
c. How do you get to school every day?	3. Heights of children in class.
d. Who can go the longest without blinking?	4. Ways of travelling to school.

2. Help one of the children plan their investigation. What does he/she need to organise to collect the data? Use the back of the sheet if you need to.

MY SUGGESTIONS TO _____