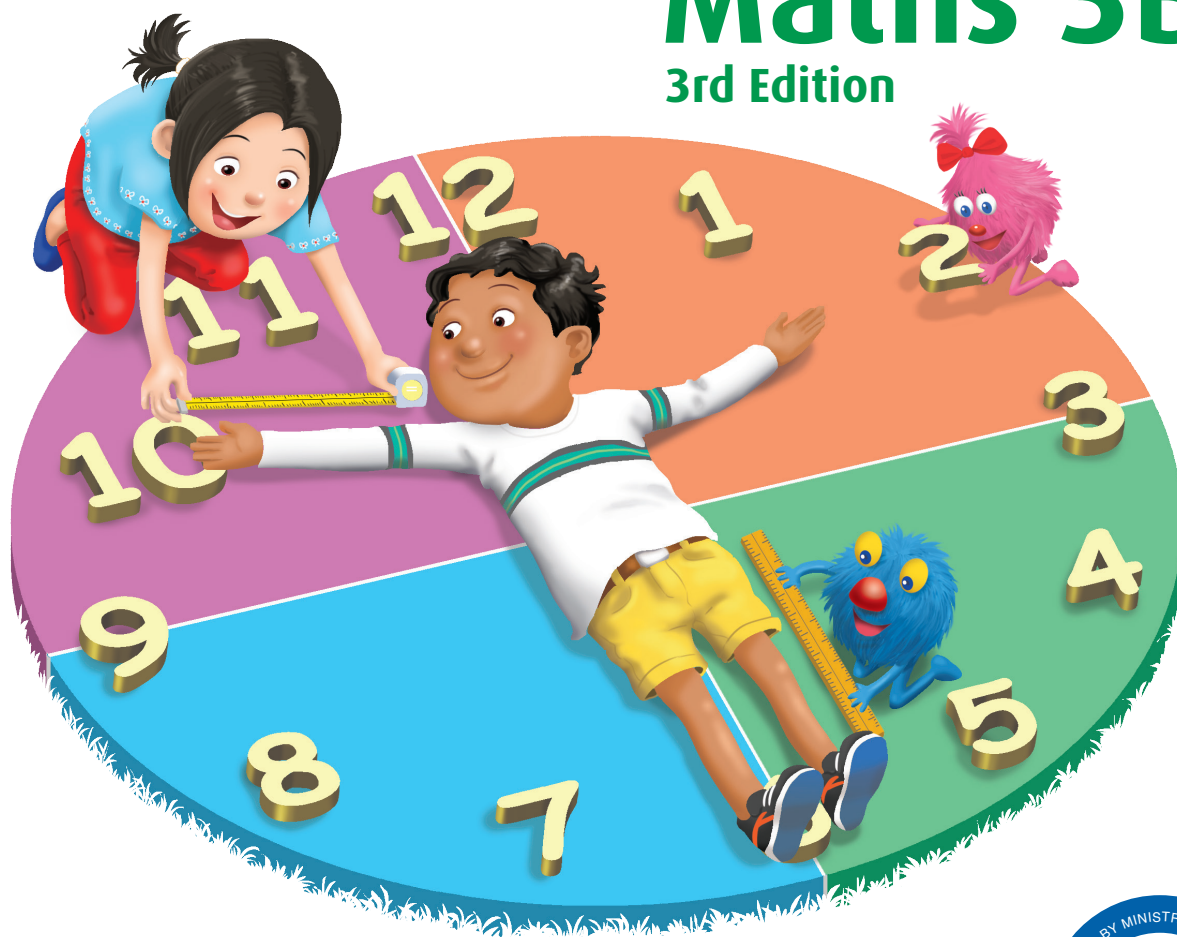


Pupil's Book

MY PALS ARE HERE!

Maths 3B

3rd Edition



Dr Fong Ho Kheong • Chelvi Ramakrishnan • Michelle Choo

mc Marshall Cavendish
Education



Preface

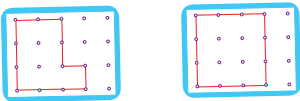
My Pals Are Here! Maths (3rd Edition) is a comprehensive, task-based and learner-centred programme designed to provide pupils with a solid foundation in mathematics and opportunities to become efficient problem solvers.

My Pals Are Here! Maths (3rd Edition) continues to make learning mathematics fun and rewarding through the use of engaging illustrations, photographs, hands-on activities, games and interactives that help reinforce and consolidate learning for pupils of different abilities.

For the Pupil:

Let's Explore!

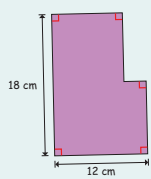
Make these two figures on a geoboard.



- Do they have the same perimeter?
- Do they have the same area?
- Make two more shapes that have the same area but different perimeters as the shapes above.

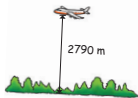
Put on Your Thinking Cap!

Find the perimeter of the figure.



Workbook 8: Put on Your Thinking Cap! page 166, Review 7, pages 167-172 and Revision 2, pages 173-184

A plane is about to land.
The plane is 2790 m above the ground.
How high is the plane above the ground in kilometres and metres?



$$2790 \text{ m} = 2000 \text{ m} + 790 \text{ m}$$

$$2790 \text{ m} = 2000 \text{ m} + 790 \text{ m} = 2 \text{ km } 790 \text{ m}$$

The plane is 2 km 790 m above the ground.

Guided Practice

- 4 km 50 m = m
- 6 km 389 m = m
- 3805 m = km m
- 5247 m = km m

1 km = 1000 m
2 km = 2000 m
4 km = 4000 m



Maths Sharing

Using the Internet, look for a place that is 1 km away from your school.
Share your findings with your classmates.

Workbook 8: Practice 2, pages 21-24

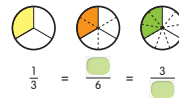
NEW!

Try practising new concepts learnt with help from your teacher in **Guided Practice!**

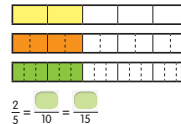
Perform investigative activities with **Let's Explore!**

Guided Practice

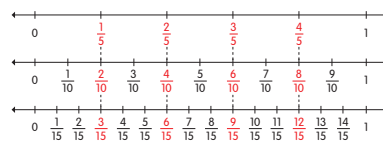
- Find the missing numerator and denominator.



- Find the equivalent fractions.



- Use the number lines to find equivalent fractions.



$$a \quad \frac{1}{5} = \frac{2}{10} = \frac{3}{15} \quad b \quad \frac{4}{5} = \frac{8}{10} = \frac{6}{15}$$

Share your thoughts with your teachers, create your own mathematics questions and become aware of your own mathematical thinking in **Maths Sharing!**

NEW!

Master concepts learnt through engaging and interactive applets in **App-tivity!**

12 Add $\frac{3}{10}$ and $\frac{3}{5}$.

13 Subtract $\frac{5}{12}$ from $\frac{3}{4}$.

14 Find the sum of $\frac{1}{5}$ and $\frac{2}{3}$.

15 Find the difference between $\frac{7}{8}$ and $\frac{3}{4}$.

App-tivity @ www.mck12education.com/sgs4students/mapp3

Workbook 8: Maths Journal, page 95

For the Teacher:

CHAPTER 13 Time

It takes 1 hour to bake the cheesecake.

It is 2 minutes past 3 now. What time do we take the cheesecake out of the oven?

We have to chill the cheesecake for 4 hours.

Then, when can I eat it?

Big Idea
Time can be used to tell when activities start and end, or how long an activity will last.

Lessons

- 1 Tell the Time
- 2 Hours and Minutes
- 3 Time and Duration
- 4 Word Problems

NEW!

Use poems, stories and scenarios pupils can relate to in the chapter openers to capture their interest, provide an engaging introduction to the topics and jump-start learning.

Challenge pupils to solve non-routine questions by applying relevant heuristics and thinking skills in **Put on Your Thinking Cap!**

NEW!

Introduce concepts through context-based tasks that involve the use of manipulatives and other concrete materials in **Learn**. At the end of each task, thought-provoking questions are posed to develop pupils' creative and critical thinking skills.

Lesson 2 Kilometres and Metres

Learn Measuring length and distance in kilometres and metres
Run twice around your school field.
Use a trundle wheel to find the total distance you have run in metres.

Put on Your Thinking Cap!

Trace the tangram below and cut out the seven pieces.

A tangram is a Chinese puzzle of seven pieces which can be pieced into a square.

1 The shape below has 2 right angles, 1 acute angle and 1 obtuse angle. It can be formed with two tangram pieces.

Now, form two more shapes. Each shape should have 2 right angles, 1 acute angle and 1 obtuse angle. Use

a three tangram pieces. b four tangram pieces.

2 Form a...

Carry out **Hands-on Activity** to promote active and collaborative learning. Where possible, pupils will complete station-based activities in rotating groups to best utilise class time.

Hands-on Activity

Work in groups of four.

- 1 Fill a 1-ℓ water bottle completely with water.
- 2 Use four empty containers of different sizes, including a large soft drink bottle.

Example

3 Estimate if the capacity of each container is more than 1 ℓ.

Container	A	B	C	D
Estimate				
Actual Capacity				

4 Fill each container completely with water. Which of the following measuring tools will you use to find the capacity of the containers? Explain your answers.

Example

36 Chapter 10 Length, Mass and Volume

NEW!

Assess understanding when pupils apply concepts learnt in **Review**.

Chapter 13 Review

- 1 Use past or to tell the time.
 - a 17 minutes 2
 - b 8 minutes 9
- 2 Tell the time.
 - a 23 minutes past 11 in the evening is p.m.
 - b 3 minutes to 3 in the morning is a.m.
- 3 Write hours and minutes in minutes.
 - a 2 h 40 min = min
 - b 3 h 5 min = min
- 4 Write minutes in hours and minutes.
 - a 205 min = h min
 - b 360 min = h min
- 5 How many hours and minutes are there from 9.07 p.m. to 6.11 a.m.?

104 Chapter 13 Time

CONTENTS

9	Money	6
	Lesson 1 Addition of Money	7
	Lesson 2 Subtraction of Money	12
	Lesson 3 Word Problems	16
10	Length, Mass and Volume	22
	Lesson 1 Metres and Centimetres	23
	Lesson 2 Kilometres and Metres	26
	Lesson 3 Kilograms and Grams	29
	Lesson 4 Litres and Millilitres	32
	Lesson 5 Word Problems	38
11	Bar Graphs	44
	Lesson 1 Reading and Interpreting Bar Graphs	45
12	Fractions	55
	Lesson 1 Equivalent Fractions	56
	Lesson 2 Comparing and Ordering Fractions	63
	Lesson 3 Addition and Subtraction of Fractions	75
13	Time	87
	Lesson 1 Tell the Time	88
	Lesson 2 Hours and Minutes	92
	Lesson 3 Time and Duration	95
	Lesson 4 Word Problems	101



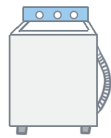
14	Angles	106
	Lesson 1 Introduction to Angles	107
15	Perpendicular and Parallel Lines	114
	Lesson 1 Perpendicular Lines	115
	Lesson 2 Parallel Lines	121
	Lesson 3 Horizontal and Vertical Lines	127
16	Area and Perimeter	131
	Lesson 1 Area	132
	Lesson 2 Square Units (cm ² and m ²)	136
	Lesson 3 Perimeter and Area	140
	Lesson 4 More Perimeter	145
	Lesson 5 Area of a Rectangle	147



I only have \$1000.
I need a new TV and
a new mobile phone.
Which TV and mobile
phone should I buy?

Electronics Sale

Washing machine A

\$657

Washing machine B

\$976TV A
\$509TV B
\$875

Camera A

\$343

Camera B

\$125

Mobile phone A

\$491

Mobile phone B

\$350

Camcorder

\$711

Game console

\$650

Handheld game

\$289

I want to buy a game console.
May I?

Lessons

- 1 Addition of Money
- 2 Subtraction of Money
- 3 Word Problems


Big Idea

You can add and subtract money the same way you add and subtract whole numbers.

Addition of Money

Learn Adding money

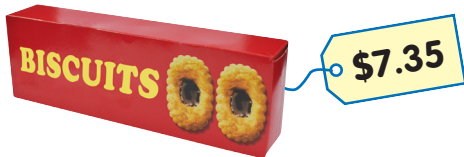
Tommy bought an eraser for 40¢ and a pencil for 60¢.

Use  to show how he paid for both items.

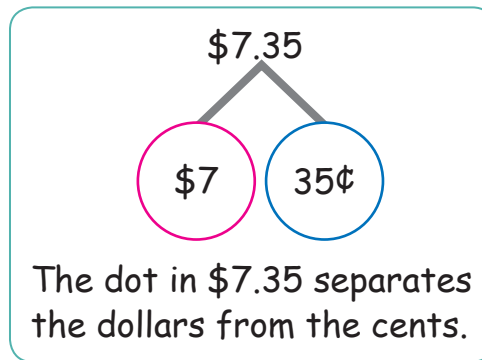
Kara had \$1000.

Use  to show how many \$100 notes she had.

Recall



$$\begin{aligned} \$7.35 &= 7 \text{ dollars } 35 \text{ cents} \\ \$7.35 &= 735\text{¢} \end{aligned}$$



Gabriel had some coins, .

How much more must he have to make \$1?

$$20\text{¢} + 20\text{¢} + 10\text{¢} = 50\text{¢}$$

$$\begin{aligned} 50\text{¢} + 50\text{¢} &= 100\text{¢} \\ &= \$1 \end{aligned}$$

Ali came up with ways to make \$1.

$$80\text{¢} + 20\text{¢} = \$1$$

$$35\text{¢} + 65\text{¢} = \$1$$

$$55\text{¢} + 45\text{¢} = \$1$$

Think of other ways to make \$1.



Mary bought a tin of sardines and a box of sweets.
How much did Mary spend altogether?



Step 1 Add the dollars.

$$\$3 + \$1 = \$4$$

Step 2 Add the cents.

$$20\text{¢} + 55\text{¢} = 75\text{¢}$$

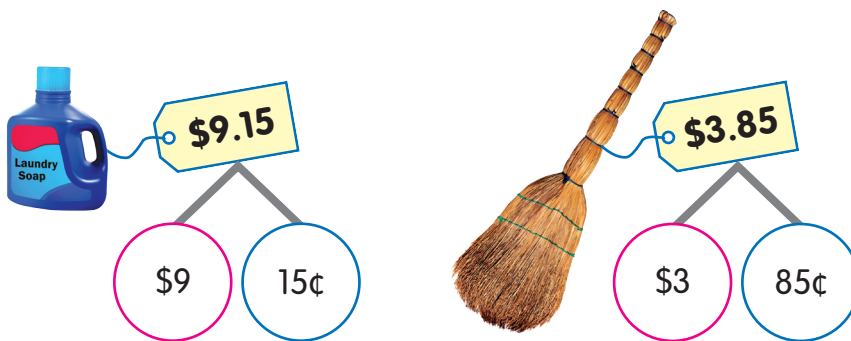
Step 3 Add the dollars and cents.

$$\$4 + 75\text{¢} = \$4.75$$

$$\$3.20 + \$1.55 = \$4.75$$

Mary spent \$4.75 altogether.

Mrs Leong bought a bottle of detergent and a broom.
How much did both items cost altogether?



Step 1 Make a dollar.

$$85\text{¢} + 15\text{¢} = \$1$$

Step 2 Add the dollars.

$$\$9 + \$3 + \$1 = \$13$$

$$\$9.15 + \$3.85 = \$13$$

Both items cost \$13 altogether.

Kaiting bought a book and a paper envelope.
How much did both items cost altogether?



Step 1 Make whole dollars.

$$\$6.70 + 30\text{¢} = \$7$$

Step 2 $\$7 + 50\text{¢} = \7.50

$$\$6.70 + \$0.80 = \$7.50$$

Both items cost \$7.50 altogether.

We can also add this way.

$$\begin{aligned} \$6.70 + \$0.80 &= \$6.50 + \$1 \\ &= \$7.50 \end{aligned}$$


How much do both items cost altogether?



We can also find the total cost this way.

$$\begin{aligned} \$15.80 + \$8 &= \$23.80 \\ \$23.80 - \$0.05 &= \$23.75 \\ \text{So, } \$15.80 + \$7.95 &= \$23.75. \end{aligned}$$

Step 1 $\$7.95 + 5\text{¢} = \8

Step 2 $\$15.75 + \$8 = \$23.75$

Both items cost \$23.75 altogether.



$$\$7.95 = \$8 - 5\text{¢}$$

How much do both items cost altogether?



\$7.75



\$2.20

Adding dollars and cents is like adding whole numbers.

$$\begin{array}{r} 775 \\ + 220 \\ \hline 995 \end{array}$$

$$\begin{array}{r} \$ 7 . 7 5 \\ + \$ 2 . 2 0 \\ \hline \$ 9 . 9 5 \end{array}$$

Align the dots before adding.



$$\$7.75 + \$2.20 = \$9.95$$

Both items cost \$9.95 altogether.

How much do both items cost altogether?



\$16.25



\$29.95

$$\begin{array}{r} \overset{1}{\$} \overset{1}{1} \overset{1}{6} . 2 5 \\ + \$ 2 9 . 9 5 \\ \hline \$ 4 6 . 2 0 \end{array}$$

Align the dots before adding.
Adding dollars and cents is like adding whole numbers.



Both items cost \$46.20 altogether.