



CAMBRIDGE  
UNIVERSITY PRESS

# CAMBRIDGE Primary Mathematics

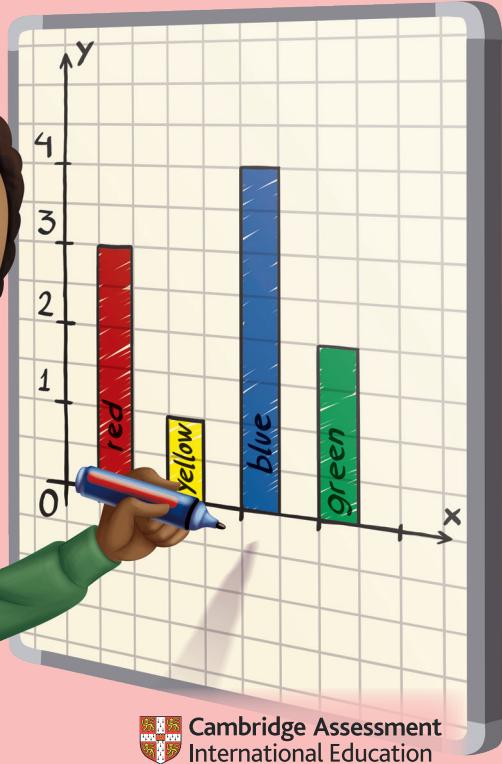
## Workbook 3

Cherri Moseley & Janet Rees



Second edition

Digital access



Cambridge Assessment  
International Education

Endorsed for learner support

SAMPLE



CAMBRIDGE  
UNIVERSITY PRESS

# CAMBRIDGE Primary Mathematics

Workbook 3

Cherri Moseley & Janet Rees



University Printing House, Cambridge CB2 8BS, United Kingdom  
One Liberty Plaza, 20th Floor, New York, NY 10006, USA  
477 Williamstown Road, Port Melbourne, VIC 3207, Australia  
314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi – 110025, India  
79 Anson Road, #06–04/06, Singapore 079906

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of  
education, learning and research at the highest international levels of excellence.

[www.cambridge.org](http://www.cambridge.org)  
Information on this title: [www.cambridge.org/9781108746496](http://www.cambridge.org/9781108746496)

© Cambridge University Press 2021

This publication is in copyright. Subject to statutory exception  
and to the provisions of relevant collective licensing agreements,  
no reproduction of any part may take place without the written  
permission of Cambridge University Press.

First published 2014  
Second edition 2021

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

Printed in 'country' by 'printer'

A catalogue record for this publication is available from the British Library

ISBN 978-1-108-74649-6 Paperback with Digital Access (1 Year)

Additional resources for this publication at [www.cambridge.org/9781108746496](http://www.cambridge.org/9781108746496)

Cambridge University Press has no responsibility for the persistence or accuracy  
of URLs for external or third-party internet websites referred to in this publication,  
and does not guarantee that any content on such websites is, or will remain,  
accurate or appropriate. Information regarding prices, travel timetables, and other  
factual information given in this work is correct at the time of first printing but  
Cambridge University Press does not guarantee the accuracy of such information  
thereafter.

---

#### NOTICE TO TEACHERS

It is illegal to reproduce any part of this work in material form (including  
photocopying and electronic storage) except under the following circumstances:

- (i) where you are abiding by a licence granted to your school or institution by the  
Copyright Licensing Agency;
- (ii) where no such licence exists, or where you wish to exceed the terms of a licence,  
and you have gained the written permission of Cambridge University Press;
- (iii) where you are allowed to reproduce without permission under the provisions  
of Chapter 3 of the Copyright, Designs and Patents Act 1988, which covers, for  
example, the reproduction of short passages within certain types of educational  
anthology and reproduction for the purposes of setting examination questions.

# Contents

How to use this book

Thinking and working mathematically

<b>1</b>	<b>Numbers to 1000</b>	5
1.1	Hundreds, tens and ones	6
1.2	Comparing and ordering	8
1.3	Estimating and rounding	8
<b>2</b>	<b>Addition, subtraction and money</b>	13
2.1	Addition	17
2.2	Subtraction	22
2.3	Money	22
<b>3</b>	<b>Multiplication and division</b>	27
3.1	Exploring multiplication and division	31
3.2	Connecting $2\times$ , $4\times$ and $8\times$	36
3.3	Connecting $3\times$ , $6\times$ and $9\times$	41
<b>4</b>	<b>3D shapes</b>	45
4.1	3D shapes	49
<b>5</b>	<b>Measurement, area and perimeter</b>	49
5.1	Measurement	55
5.2	2D shapes and perimeter	55
5.3	Area	61
<b>6</b>	<b>Fractions of shapes</b>	67
6.1	Fractions and equivalence of shapes	74
<b>7</b>	<b>Statistics: tally charts and frequency tables</b>	74
7.1	Statistics	81
<b>8</b>	<b>Time</b>	81
8.1	Time	87

<b>9 More addition and subtraction</b>	92
9.1 Addition: regrouping tens and reordering	92
9.2 Subtraction: regrouping tens	98
9.3 Complements	103
<b>10 More multiplication and division</b>	108
10.1 Revisiting multiplication and division	108
10.2 Playing with multiplication and division	111
10.3 Extending multiplication and division	115
<b>11 More fractions</b>	120
11.1 Fractions of numbers	120
11.2 Ordering and comparing fractions	125
11.3 Calculating with fractions	130
<b>12 Measures</b>	134
12.1 Mass	134
12.2 Capacity	141
12.3 Temperature	148
<b>13 Time (2)</b>	157
13.1 Time	157
13.2 Timetables	164
<b>14 Angles and movement</b>	173
14.1 Angles, direction, position and movement	173
<b>15 Graphs</b>	184
15.1 Pictograms and bar charts	184
15.2 Venn and Carroll diagrams	195
<b>16 Chance</b>	203
16.1 Chance	203
<b>17 Pattern and symmetry</b>	210
17.1 Shape and symmetry	210
17.2 Pattern and symmetry	217
Acknowledgements	222

# How to use this book



This workbook provides questions for you to practise what you have learned in class. There is a unit to match each unit in your Learner's Book. Each exercise is divided into three parts:

- **Focus:** these questions help you to master the basics
- **Practice:** these questions help you to become more confident in using what you have learned
- **Challenge:** these questions will make you think more deeply.

You might not need to work on all three parts of each exercise.

You will also find these features:

Important words that →  
you will use.

Step-by-step examples showing a  
way to solve a problem. →



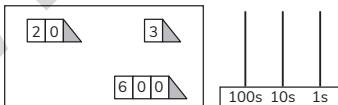
These questions will help you  
develop your skills of thinking →  
and working mathematically.



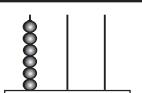
compose	decompose
exchange	regroup
single	

## Worked example 1

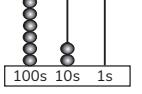
Draw beads on the abacus to show this 3-digit number.



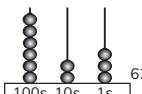
Draw six beads on the 100s tower to stand for 600.



Draw two beads on the 10s tower to stand for 20.



Draw three beads on the 1s tower for 3.  
Together, the beads represent the 3-digit  
number 623.



5 What is the value of the ringed digit in each 3-digit number?

① 64 \_\_\_\_\_ 23 ⑦ \_\_\_\_\_

31 ⑤ \_\_\_\_\_ 1 ② 8 \_\_\_\_\_

④ 52 \_\_\_\_\_ 3 ⑧ 1 \_\_\_\_\_

# Thinking and Working Mathematically

There are some important skills that you will develop as you learn mathematics.



**Specialising**  
is when I give an example of something that fits a rule or pattern.



**Characterising**  
is when I explain how a group of things are the same.

**Generalising**  
is when I explain a rule or pattern.

A large, light-colored speech bubble contains text about generalising. Arrows point towards this bubble from the left and right, originating from the characters' speech bubbles.

**Classifying**  
is when I put things into groups.

A large, light-colored speech bubble contains text about classifying. Arrows point towards this bubble from the top and bottom, originating from the characters' speech bubbles.



**Critiquing** is  
when I think about  
what is good and what  
could be better in my  
work or someone  
else's work.

**Improving**  
is when I try to  
make my work  
better.

**Conjecturing** is  
when I think of an idea  
or question to develop  
my understanding.



**Convincing**  
is when I explain my  
thinking to someone else,  
to help them  
understand.

# 1

# Numbers to 1000

## > 1.1 Hundreds, tens and ones

### Exercise 1.1

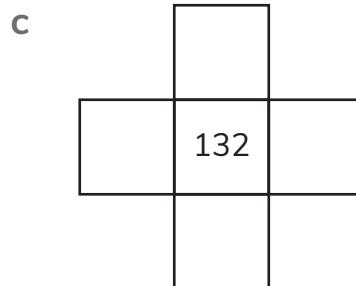
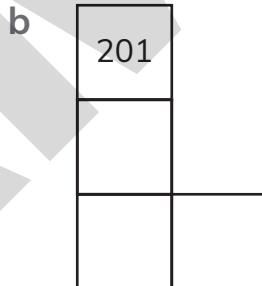
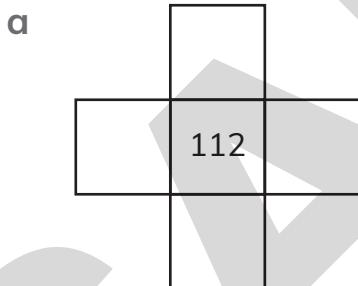
#### Focus

thousand

- 1 Here is the last row of a 100 square. Write the numbers in the next row, which is the first row of the 101 to 200 square.

91	92	93	94	95	96	97	98	99	100
101									

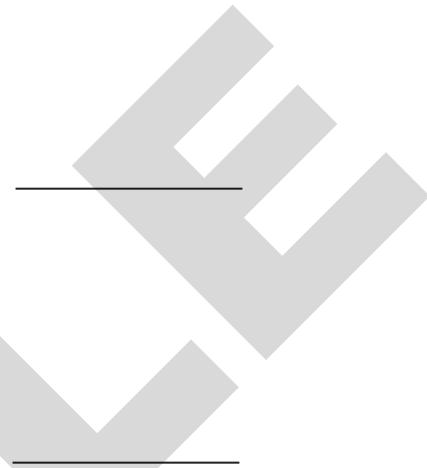
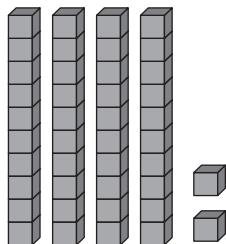
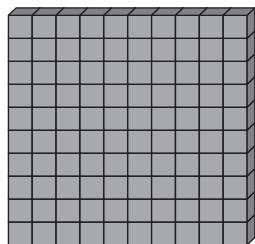
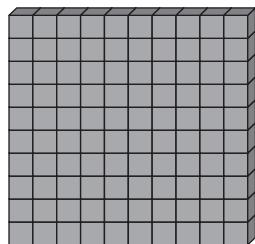
- 2 Complete these pieces from a 1 to 1000 number strip.



- 3 Draw a representation of 316.  
How will you show the value of each digit?

4 What 3-digit numbers are represented below?

a



b

100s	10s	1s
★ ★ ★ ★ ★ ★	★	★ ★★



5 What is the value of the ringed digit in each 3-digit number?

① 64 \_\_\_\_\_

23⑦ \_\_\_\_\_

31⑤ \_\_\_\_\_

1②8 \_\_\_\_\_

④ 52 \_\_\_\_\_

3⑧1 \_\_\_\_\_

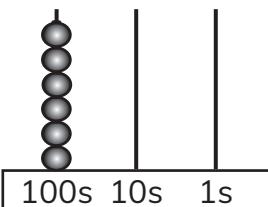
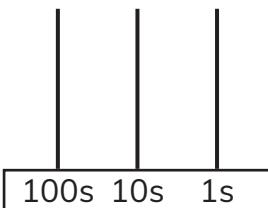
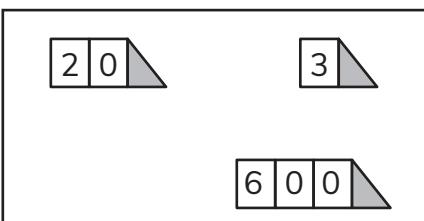
### Practice

6 Write the numbers in the next row of the 1 to 1000 strip.

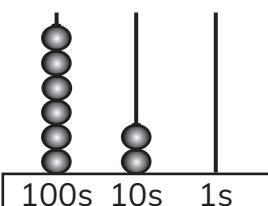
351	352	353	354	355	356	357	358	359	360

**Worked example 1**

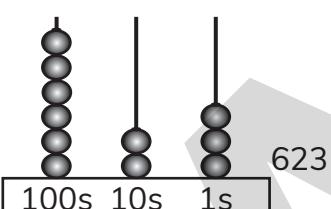
Draw beads on the abacus to show this 3-digit number.



Draw six beads on the 100s tower to stand for 600.



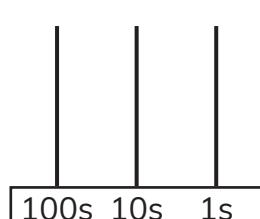
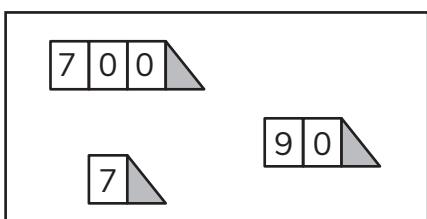
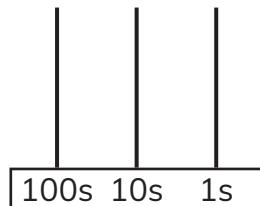
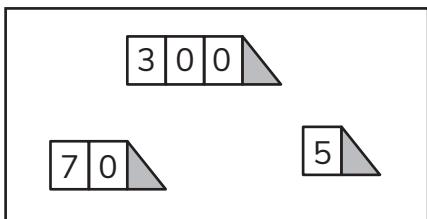
Draw two beads on the 10s tower to stand for 20.



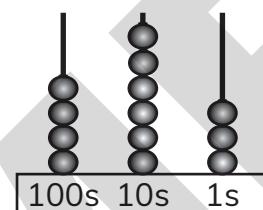
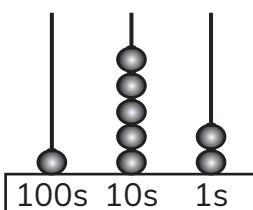
Draw three beads on the 1s tower for 3.

Together, the beads represent the 3-digit number 623.

- 7 Draw beads on each abacus to show each 3-digit number.



- 8 Which three-digit number is represented on each abacus?

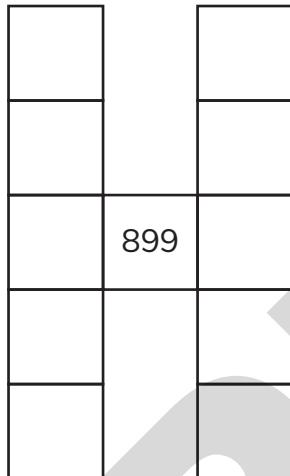
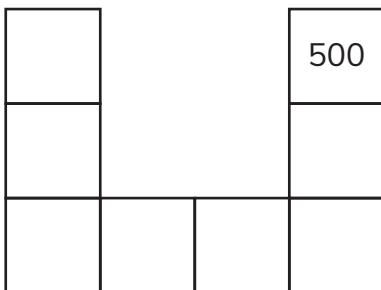


- 9 Write this 3-digit number in words.

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

**Challenge**

10 Complete these pieces, which come from a 1 to 1000 number strip.



11 Write the missing numbers on each worm.



12 Read along each row to find three 3-digit numbers.

5	4	6
3	1	8
9	7	2

Read down each column to find another three 3-digit numbers.

Write each number in words.

---



---



---



---



---



---



13



When you have two different digit cards, you can make two different 2-digit numbers. So when you have three different digit cards, you must be able to make three different 3-digit numbers.

Is Arun correct? How do you know?

---



---

## > 1.2 Comparing and ordering

### Exercise 1.2

#### Focus

- 1 Complete these pieces, which come from a 1000 square.

	190	

	230	

	350	

inequalities

is greater than, >

is less than, <

symbol

## 1 Numbers to 1000

- 2 Compare these numbers and complete the sentences.

100s	10s	1s
2	4	9
1	7	3

\_\_\_\_\_ is less than \_\_\_\_\_.

\_\_\_\_\_ is greater than \_\_\_\_\_.

- 3 Write the statements in question 2 using the symbols < and >.

- 4 Order these numbers from smallest to greatest.

327

79

236

64

142

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

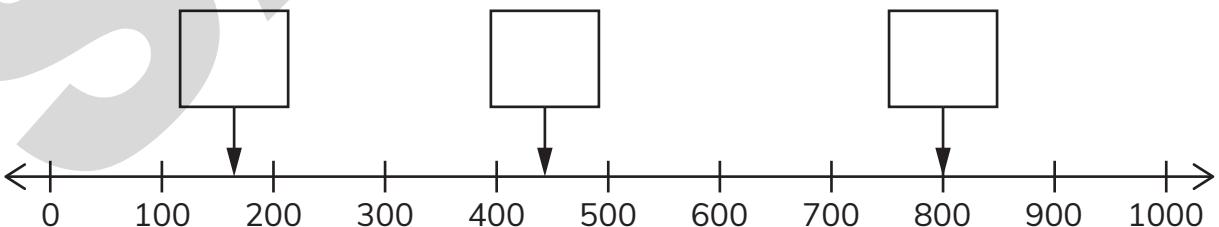
\_\_\_\_\_

\_\_\_\_\_

smallest

greatest

- 5 Estimate the value of each number marked on the number line.



## Practice

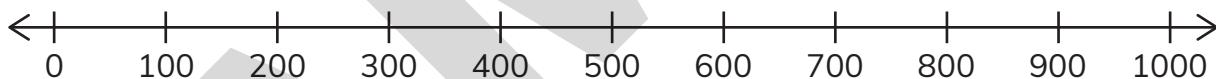
- 6 Use  $<$  and  $>$  to write two inequalities about these numbers.

<b>100s</b>	<b>10s</b>	<b>1s</b>
4	5	6
4	6	5

- 7 Order these numbers from greatest to smallest.

968      689      98      96      896

- 8 Mark the numbers from question 7 on the number line.



# Challenge

- 9** Compare these numbers. Write some inequalities using  $<$  or  $>$ .

<b>100s</b>	<b>10s</b>	<b>1s</b>
5	7	4
7	5	3
5	4	7

10 Yusef looks at the place value grid in question 9 and writes:

$$547 < 753 > 574$$

$$753 < 547 < 574$$

Write some more inequalities like those written by Yusef.



11 What could the missing digit be in each of these inequalities?

$$634 < 6 \square 1$$

$$765 > \square 83$$

$$257 > 25 \square$$

$$372 < \square 72$$

12 Order the heights of these towers from shortest to tallest.

Name of tower	Location	Height in metres
Lakhta Centre	St Petersburg	462
Willis Tower	Chicago	442
Burj Khalifa	Dubai	828
Petronas Tower 1	Kuala Lumpur	452
Shanghai Tower	Shanghai	632
Lotte World Tower	Seoul	555

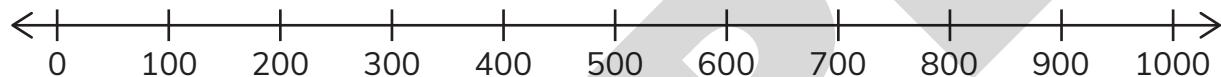
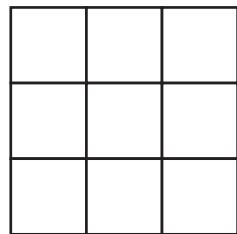
shortest

tallest

- 13 Write the digits 1 to 9 anywhere in the grid.

Read across and down the grid to find six 3-digit numbers.

Mark each number on the number line.



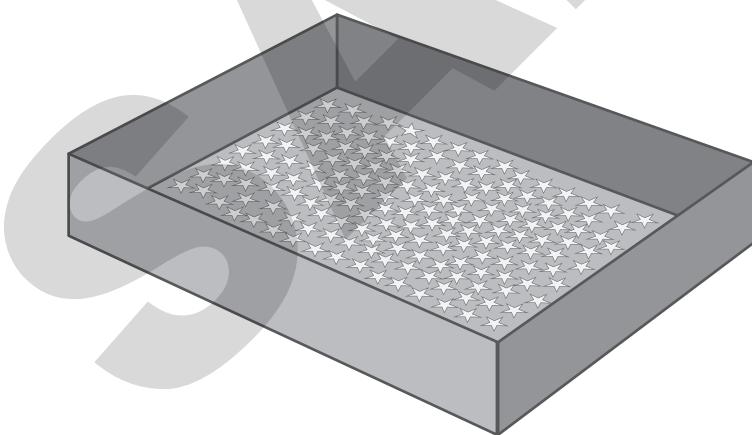
## › 1.3 Estimating and rounding

### Exercise 1.3

#### Focus

- 1 Estimate how many stars there are in the box.

estimate range  
round, rounding



1 Numbers to 1000

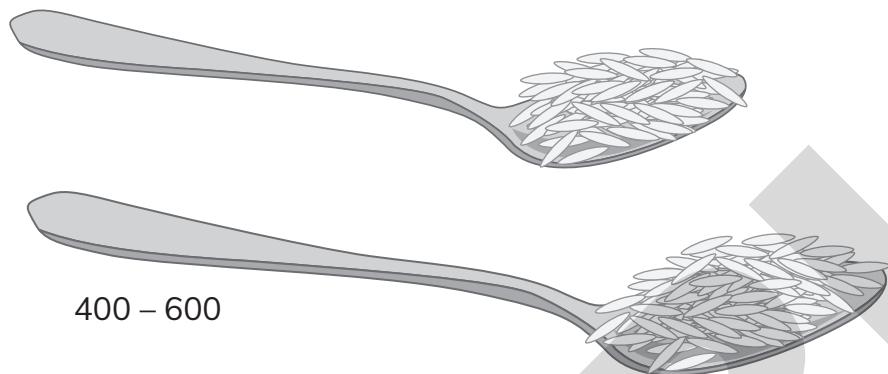
2 Estimate how many grains of rice are on the middle spoon.



100 – 200



400 – 600



3 Round each number to the nearest 10.

271 \_\_\_\_\_

138 \_\_\_\_\_

397 \_\_\_\_\_

404 \_\_\_\_\_



4 Round each number to the nearest 100.

164 \_\_\_\_\_

325 \_\_\_\_\_

449 \_\_\_\_\_

250 \_\_\_\_\_

## Practice



- 5 Class 3 used this table to check their estimates of the number of beans in different plastic bags.

Number of beans	Mass of beans
100	5 grams
200	10 grams
300	15 grams
400	20 grams
500	25 grams
600	30 grams
700	35 grams
800	40 grams
900	45 grams
1000	50 grams

- a Samira estimated that her plastic bag had 300 to 400 beans. They weighed 18 grams. Is this a good estimate?
- b Pedro's beans weighed 31 grams. What range would be a good estimate for his beans?
- 6 Round each amount to the nearest \$10.

\$537 \_\_\_\_\_

\$772 \_\_\_\_\_

\$695 \_\_\_\_\_

\$808 \_\_\_\_\_

- 7 Round each amount to the nearest 100 kilograms.

150 kilograms      kilograms

555 kilograms      kilograms

444 kilograms      kilograms

501 kilograms      kilograms

### Challenge

- 8 Round the height of each tower to the nearest 10 metres and then to the nearest 100 metres.

Name of tower	Location	Height in metres	Nearest 10 metres	Nearest 100 metres
Lakhta Centre	St Petersburg	462		
Willis Tower	Chicago	442		
Burj Khalifa	Dubai	828		
Petronas Tower 1	Kuala Lumpur	452		
Shanghai Tower	Shanghai	632		
Lotte World Tower	Seoul	555		

- 9 Which towers are the same height when their heights are rounded to the nearest 100 metres?
- 10 Zara rounds a number to the nearest 10 and then to the nearest 100. Her answer both times is 500. What could her number be?

**11** Follow the rounding instructions.

What do you notice about the results of rounding to 100?

323	645	809
952	216	448
747	558	178

Round to  
nearest 10


Round to  
nearest 100


Round to  
nearest 100


**12** In a shop, all prices are rounded to the nearest \$10.

Would all the customers be happy about the changes in price?

## 2

# Addition, subtraction and money

## > 2.1 Addition

### Exercise 2.1

#### Focus

compose	decompose
exchange	regroup
single	

- 1 Complete each addition. Show how you found each total.

$24 + 5 = \boxed{\phantom{00}}$

$42 + 5 = \boxed{\phantom{00}}$

$48 + 9 = \boxed{\phantom{00}}$

$37 + 8 = \boxed{\phantom{00}}$

- 2 Complete each addition. Show how you found each total.

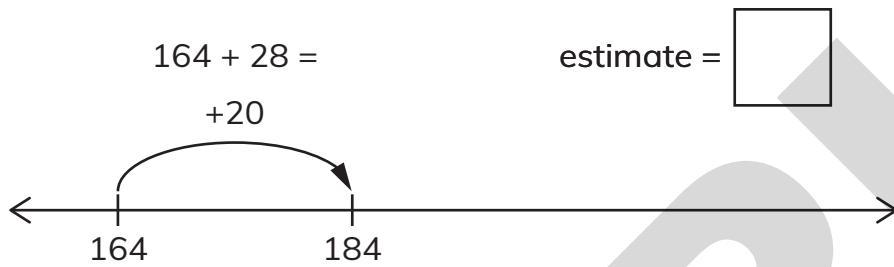
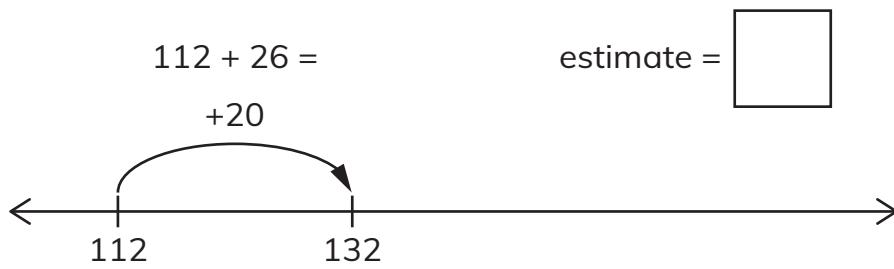
$123 + 6 = \boxed{\phantom{00}}$

$153 + 5 = \boxed{\phantom{00}}$

$254 + 7 = \boxed{\phantom{00}}$

$235 + 8 = \boxed{\phantom{00}}$

- 3 Estimate and then complete each addition to find the total.



- 4 Cheng did not have enough time to finish his calculations.  
Complete them both for him.

a  $315 + 232$  estimate:  $320 + 230 = 550$

$$= 300 + 10 + 5 + 200 + 30 + 2$$

$$= \boxed{\quad}$$

b  $247 + 218$  estimate  $250 + 220 = \boxed{\quad}$

$$= 200 + 40 + 7 +$$

$$= \boxed{\quad}$$

**Practice**

- 5 Read across or down the grid to find a 2-digit number.  
Add 6 to each number. Show how you found your totals.

4	3
7	8

- 6 Complete each addition. Show how you found each total.

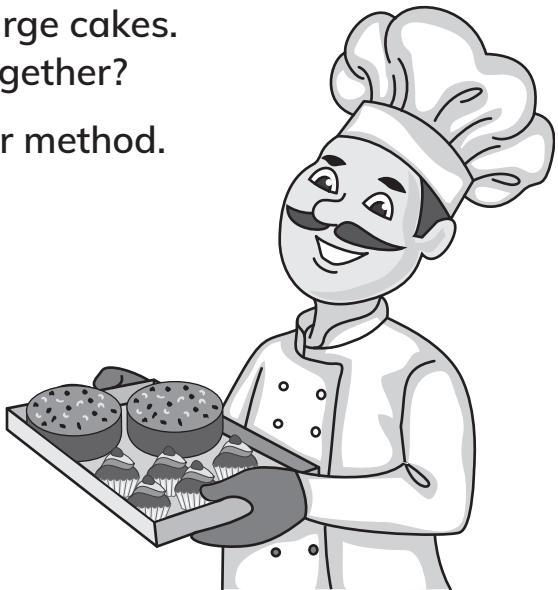
$$246 + 3 = \boxed{\phantom{00}}$$

$$171 + 7 = \boxed{\phantom{00}}$$

$$345 + 8 = \boxed{\phantom{00}}$$

$$269 + 9 = \boxed{\phantom{00}}$$

- 7 The baker made 246 small cakes and 26 large cakes.  
How many cakes did the baker make all together?  
Estimate and then find the total. Show your method.



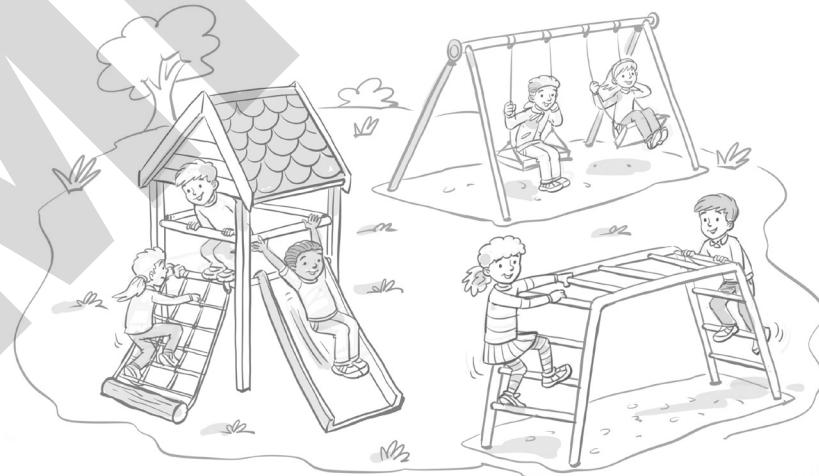
- 8 A market stall has 38 apples left.  
A box of 148 apples are delivered.  
How many apples are on  
the stall now?

Estimate, then calculate.  
Show your method.



- 9 359 children and 218 adults  
visited the play park today.  
How many people visited the  
play park today?

Estimate and then calculate.  
Show your method.



- 10 Estimate the total, then use an empty number line to help  
you add 414 and 268.



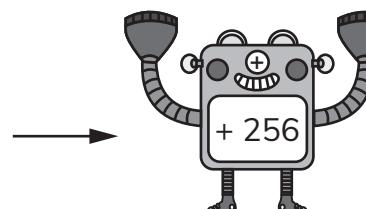
**Challenge**

11 The addition machine adds 56 to each number in the grid.

Estimate and then complete the answer grid.

How will you find the totals?

122	225	413
430	328	117
134	229	516





estimate

total



12 Angela spilt some ink on the ones digits in her number sentence.

$$32 \cdot + 14 \cdot = 475$$

What could her calculation have been? Find all the possible answers.

# > 2.2 Subtraction

## Exercise 2.2

### Focus

**regroup**

- 1 Complete each subtraction. Show how you found each answer.

$$38 - 5 = \boxed{\phantom{00}}$$

$$49 - 7 = \boxed{\phantom{00}}$$

$$64 - 7 = \boxed{\phantom{00}}$$

$$25 - 8 = \boxed{\phantom{00}}$$

- 2 Complete each subtraction. Show how you found each answer.

$$169 - 6 = \boxed{\phantom{00}}$$

$$238 - 4 = \boxed{\phantom{00}}$$

$$134 - 8 = \boxed{\phantom{00}}$$

$$243 - 7 = \boxed{\phantom{00}}$$

- 3 Estimate and then complete each subtraction.

$$184 - 42 = \boxed{\phantom{00}}$$

$$\text{estimate} = 180 - \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$361 - 33 = \boxed{\phantom{00}}$$

$$\text{estimate} = 360 - \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

- 4 Emyr did not have enough time to finish his calculation.  
Complete them both for him.

estimate:  $460 - 250 = \boxed{\phantom{00}}$

No regrouping needed.

$$\begin{array}{r} 458 = 400 + 50 + 8 \\ - 246 = \underline{200 + 40 + 6} \\ = \boxed{\phantom{00}} \end{array}$$

estimate:  $370 - 220 = \boxed{\phantom{00}}$

Regroup 373 into  $300 + 60 + 13$ .

$$\begin{array}{r} 373 = 300 + \boxed{\phantom{00}} + \boxed{\phantom{00}} \\ - 217 = \underline{200 + 10 + 7} \\ = \boxed{\phantom{00}} \end{array}$$

## Practice

- 5 Sort these subtractions into the table.

$47 - 3$

$72 - 17$

$87 - 29$

$93 - 8$

$54 - 5$

$61 - 15$

$76 - 23$

$57 - 7$

Change a ten for 10 ones to find the answer	No regrouping needed to find the answer

- 6 The shop has 268 metres of rope.  
Minh buys 5 metres.  
How much rope does the shop have now?

\_\_\_\_\_



The next day, Loki buys 8 metres of rope.

How much rope is left in the shop now? \_\_\_\_\_

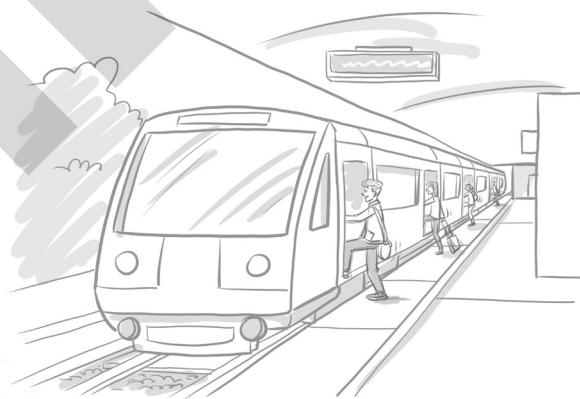
- 7 763 children attend Blue Haven School. 38 children are away today. How many children are in school today?

Estimate and then find the answer. Show your method.



- 8 There are 362 people on the train. At the first station, 47 people get off and no one gets on. How many people are on the train now?

Estimate and then find the answer. Show your method.



- 9 763 children attend Blue Haven School. 427 of them are girls. How many boys are there?

Estimate and then calculate. Show your method.

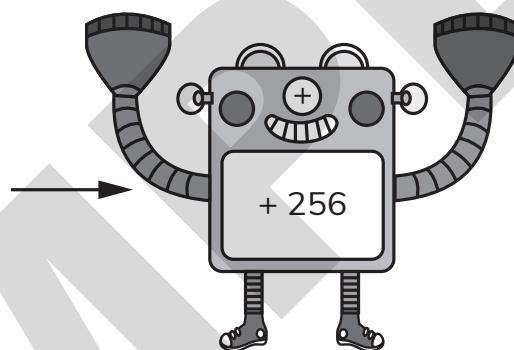
- 10 Estimate and then use an empty number line to help you find the difference between 426 and 483.



### Challenge

- 11 The subtraction machine subtracts 37 from each number in the grid.  
Estimate and then complete the answer grid.  
How will you find the totals?

179	228	691
154	545	472
989	863	366



estimate

total





- 12 Ahliya spilt some ink on the ones digits in her number sentence.

$$55 \blot + 31 \blot = 232$$

What could her calculation have been? Find all the possible answers.

# > 2.3 Money

## Exercise 2.3

### Focus

**buy change decimal point spend**

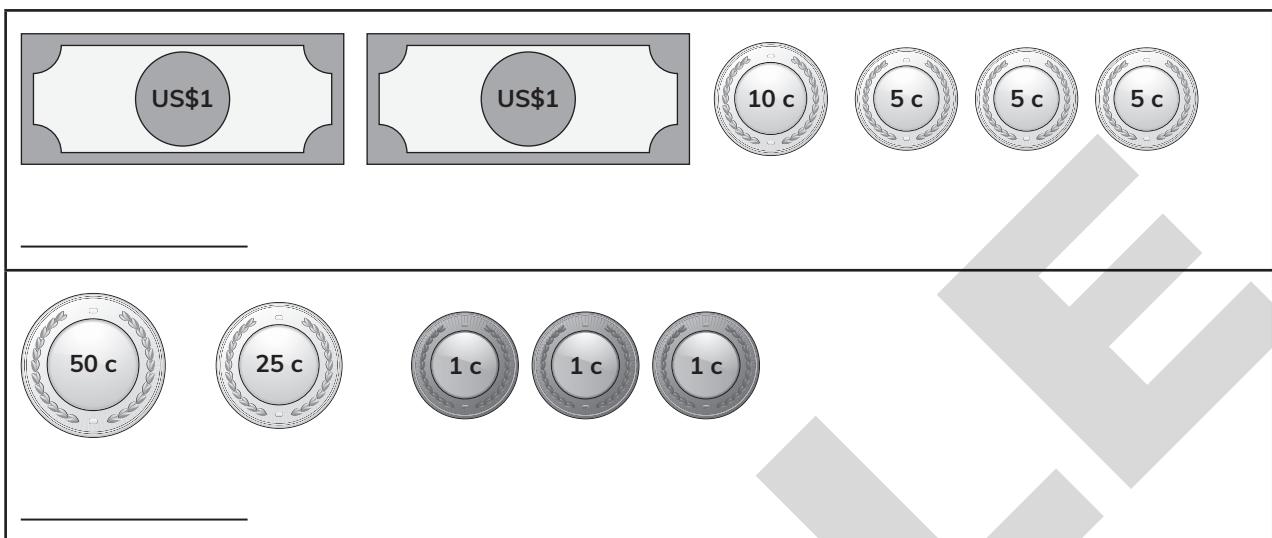


- 1 Write the missing amounts.

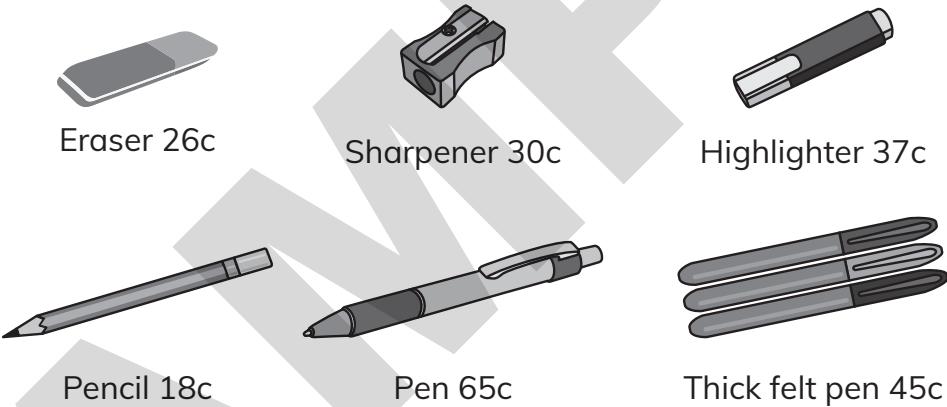
Using dollars and cents	Using a decimal point
\$3 and 25c	
\$6 and 74c	
\$12 and 18c	
	\$9.50
	\$14.95
	\$1.62

- 2 Use a decimal point to write each amount of money in dollars and cents.

<hr/>				
<hr/>				
<hr/>				

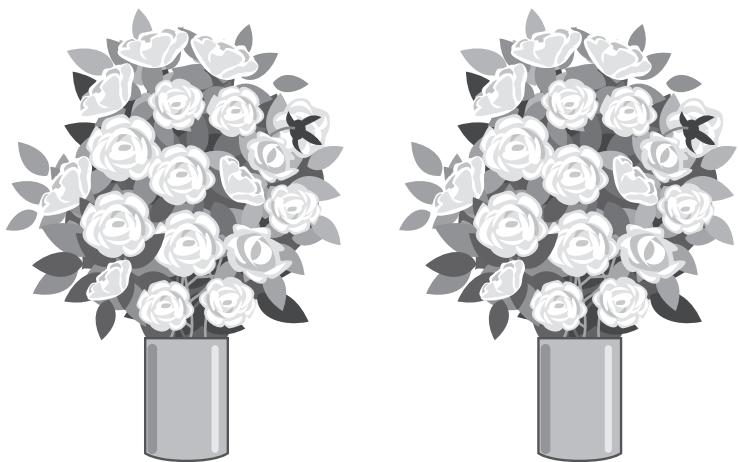


- 3 Adi has 50c. He buys a pencil and a sharpener.  
How much does he spend? How much change will he get?



- 4 Two bunches of flowers cost \$10.  
How much does one bunch  
of flowers cost?

Write your number sentence  
and solve it to find the cost of  
a bunch of flowers.



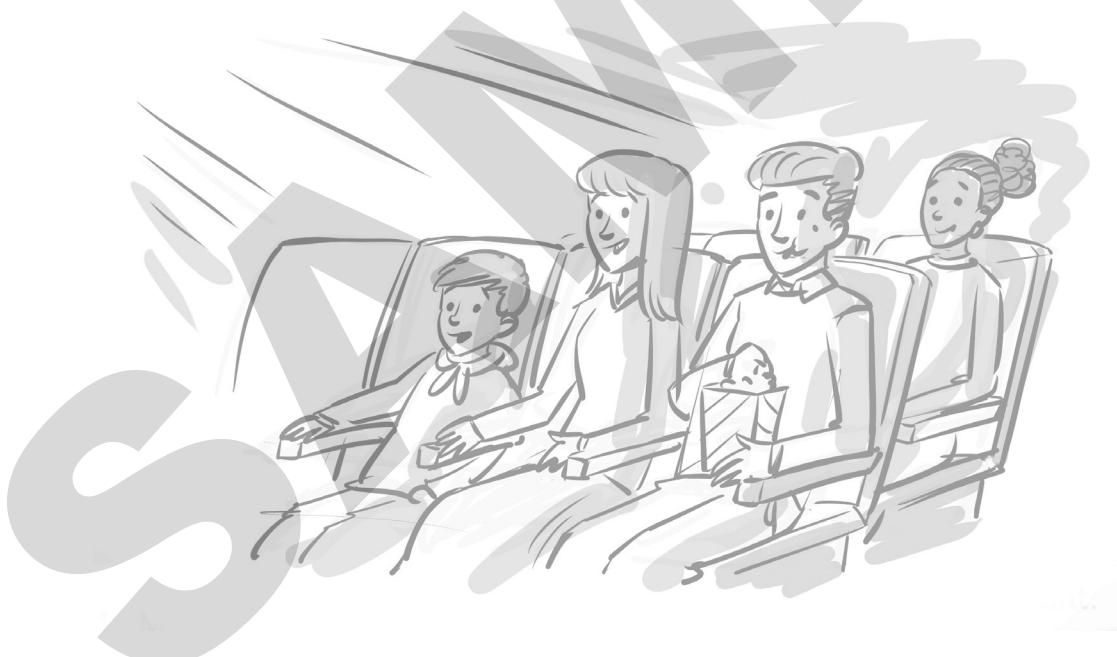
## Practice



- 5 Write the missing amounts.

Using dollars and cents	Using a decimal point
\$11 and 9c	
	\$65
4c	
	\$4.01
75c	
	\$0.99

- 6 I spent \$7.25 on a cinema ticket and 70c on some popcorn.  
How much did I spend? How much change will I get from \$10?



**Worked example**

Two bags of apples cost \$7.

How much does one bag of apples cost?

Write your number sentence and solve it to find the cost of one bag of apples.

$$\boxed{\quad} + \boxed{\quad} = \$7$$

$$6 \div 2 = 3 \text{ and } 3 + 3 = 6$$

$$\text{Half of } \$1 = 50\text{c}$$

$$\boxed{\quad} = \$3 + 50\text{c} = \$3.50$$

So one bag of apples costs \$3.50

I need to find half of \$7.

I know half of \$6 is \$3.

Half of \$1 is 50c.

Half of \$7 is \$3.50.

- 7 Two plants in pots cost \$9.  
How much does 1 plant in a pot cost?

Write your number sentence and solve it to find the cost of a plant in a pot.

**Challenge**

- 8 Sibo writes \$7 and 9 cents = \$9.7

What mistake has Sibo made?

---



---

- 9 Sarah has \$30. She buys a skirt and gets \$1.01 change. How much does the skirt cost?

Write your number sentence and solve it to find the cost of the skirt.



- 10 Ahmed spends \$63.25 on new clothes. He has \$2.75 change. How much money did Ahmed have before he bought the clothes?



## 3

# Multiplication and division

## › 3.1 Exploring multiplication and division

### Exercise 3.1

#### Worked example 1

Draw a ring around the multiples of 10.

23, 147, 60, 194, 220, 381, 600, 425,  
276, 390

array    commutative  
multiple    pattern  
sequence    term  
term-to-term  
rule

23, 147, 60, 194, 220, 381, 600, 425,  
276, 390.

23, 147, 60, 194, 220, 381, 600,  
425, 276, 390.

Multiples of 10 always have 0 in  
the ones place.

I can see 60, 220, 600 and 390 with  
0 in the ones place. They are all  
multiples of 10, so I need to draw  
a ring around each of them.

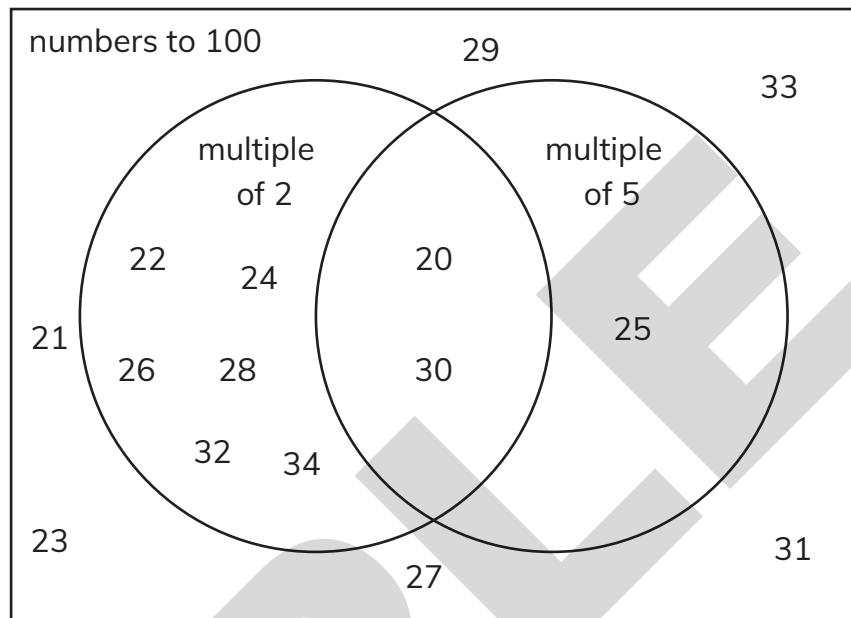
#### Focus

- 1 Draw a ring around all the multiples of 5.

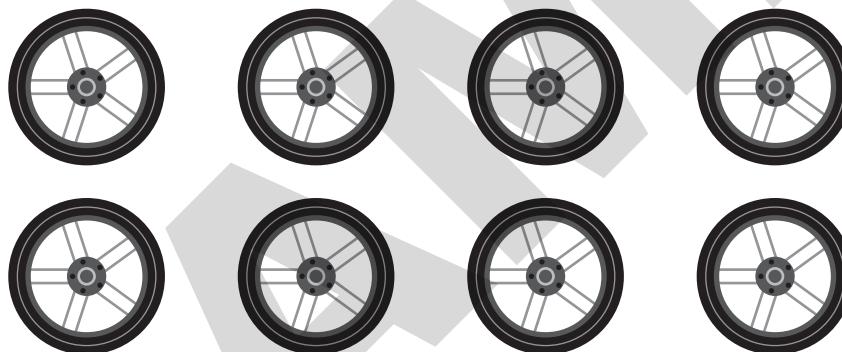
15, 72, 125, 230, 86, 157, 390, 269, 95, 414



- 2 Mosego sorted the numbers from 20 to 40 into the correct places on the Venn diagram. Finish Mosego's work by putting 35, 36, 37, 38, 39 and 40 into the correct places in the Venn diagram.



- 3 Write the fact family for this array.



$$\boxed{\text{ }} \times \boxed{\text{ }} = \boxed{\text{ }}$$

$$\boxed{\text{ }} \div \boxed{\text{ }} = \boxed{\text{ }}$$

$$\boxed{\text{ }} \times \boxed{\text{ }} = \boxed{\text{ }}$$

$$\boxed{\text{ }} \div \boxed{\text{ }} = \boxed{\text{ }}$$

$$\boxed{\text{ }} = \boxed{\text{ }} \times \boxed{\text{ }}$$

$$\boxed{\text{ }} = \boxed{\text{ }} \div \boxed{\text{ }}$$

$$\boxed{\text{ }} = \boxed{\text{ }} \times \boxed{\text{ }}$$

$$\boxed{\text{ }} = \boxed{\text{ }} \div \boxed{\text{ }}$$

- 4 Write the multiplying by 10 facts shown here.

100s	10s	1s
		7
	7	0

100s	10s	1s
	1	9
1	9	0

## Practice

- 5 Describe the multiples of 2, 5 and 10.  
Use the words 'odd' and 'even'.

---



---



---

How are multiples of 2 and 10 the same?

How are the multiples of 5 different?

---



---



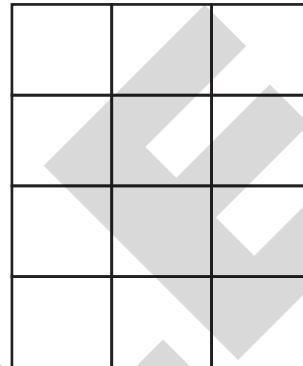
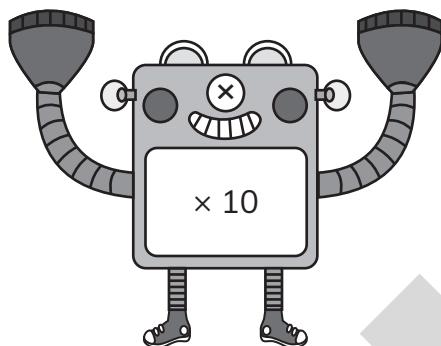
---

- 6 I am an odd number. I am  $> 70$  but  $< 80$ . I am a multiple of 5.  
Which number am I?
- 7 Which multiplication facts from the 1, 2, 5 and 10 multiplication tables have only four facts in their fact family?

Write the fact family for one of these facts.

- 8 This machine multiplies numbers by 10. Complete the grid to record the numbers after they come out of the machine.

74	9	56
6	82	29
17	38	5
3	94	61



### Challenge

- 9 I am an even number. I am  $> 374$  but  $< 386$ .  
I am a multiple of 2, 5 and 10. Which number am I?

10



The multiplication fact  $1 \times 1 = 1$  is special because all the numbers in the fact family are the same and there isn't another fact family like that.

Find a different special multiplication fact from the 1, 2, 5, 10 fact families. Explain why it is special.

---

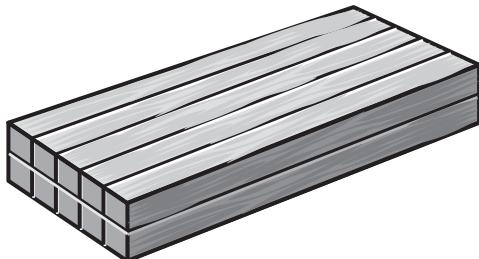


---



---

- 11 Binh has ten 65 cm lengths of timber.  
What is the total length of timber that Binh has?



12



$0 \times 10 = 10$ , because  
multiplying by 10 makes any number  
ten times larger.

Do you agree with Arun? Why?

---

---

# > 3.2 Connecting $2 \times$ , $4 \times$ and $8 \times$

## Exercise 3.2

### Focus

- 1 Which multiplication fact is represented below?

four	four	four	<input type="text"/>	<input type="text"/> × <input type="text"/> = <input type="text"/>
------	------	------	----------------------	--

- 2 Write the multiplication table for 4, up to  $4 \times 10 = 40$ .

- 3 Colour all the multiples of 8.

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	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

- 4 There are six spiders on a plant. Write and solve the multiplication fact to find out how many spiders' legs are on the plant.



**Worked example 2**

The term-to-term rule is ‘add 4’.

Start at 2. What are the next five numbers in the sequence?

2, , , , ,

2, 6, , , ,

The term-to-term rule tells me what to do to find the next number in the sequence.

$$2 + 4 = 6$$

2, 6, 10, 14, 18, 22

Now I can add 4 to that number to find the next number and keep going to find the rest of the sequence.

$$6 + 4 = 10$$

$$10 + 4 = 14$$

$$14 + 4 = 18$$

$$18 + 4 = 22$$



5 The term-to-term rule is ‘add 4’.

Start at 3. What are the next five numbers in the sequence?

3, , , , ,

**Practice**

6 What is the third multiple of 4?

What is the seventh multiple of 4?

7 What are the next five multiples of 4?

40, , , , ,

- 8 Describe the pattern of the multiples of 4.
- 
- 

- 9 What is the fifth multiple of 8?

What is the ninth multiple of 8?

- 10 Write the missing multiplication facts.

		$4 \times 4 = 16$		
$2 \times 2 = 4$	double →		double →	
	halve →		halve →	
$2 \times 7 = 14$				$8 \times 8 = 64$

- 11 What is the term-to-term rule in the sequence below?  
Find the missing numbers.

7, 15, , , ,

The term-to-term rule is \_\_\_\_\_.

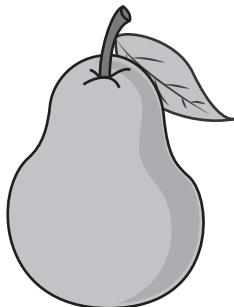
### Challenge

- 12 Complete the multiplication grid.

×	2	4	8
3			
5	10	20	
6			
9			

13 A pear costs 8c.

Write the multiplication fact that tells you the cost of seven pears.



\_\_\_\_\_

14 A white TP-shirt costs \$4.

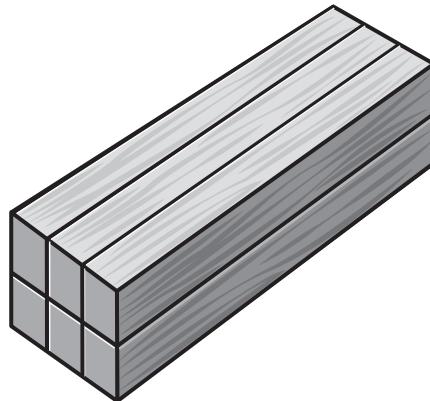
Write the multiplication fact that tells you the cost of T-shirts.



\_\_\_\_\_

15 Tara's father bought six pieces of timber,  
each measuring 4 metres long.

What is the total length of timber that  
Tara's father bought?



16 Choose a term-to-term rule, a start number and an  
end number. Write your sequence.

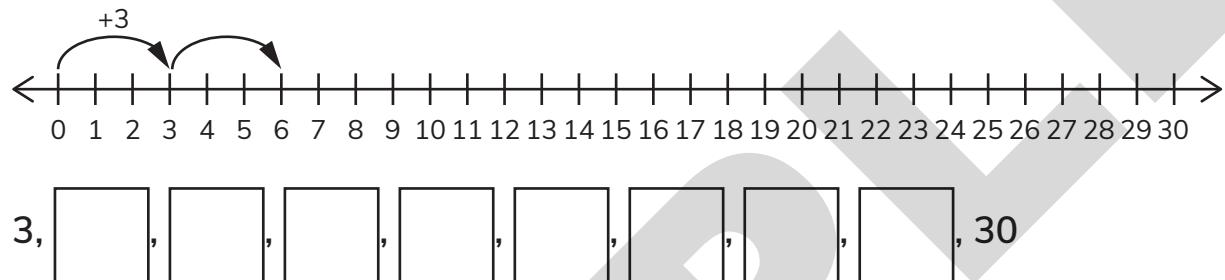
# > 3.3 Connecting $3 \times$ , $6 \times$ and $9 \times$

## Exercise 3.3

### Focus

**counting stick**

- 1 Use the number line to help you find the multiples of 3.



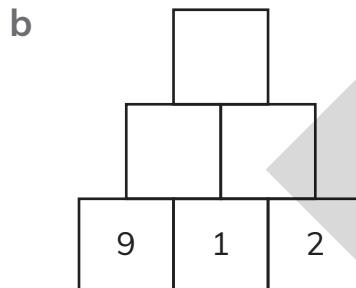
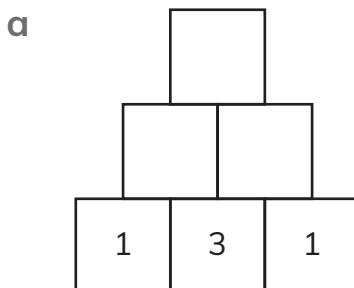
- 2 Use the number line in question 1 to help you find the multiples of 6. Use the pattern to help you continue to 60.

6, \_\_\_, \_\_\_, \_\_\_, \_\_\_, \_\_\_, \_\_\_, \_\_\_, \_\_\_, 60

- 3 Write the missing multiplication facts.

$3 \times 2 = 6$	double →	halve →	$6 \times 4 = 24$
$3 \times 6 = 18$			
<input type="text"/>			
<input type="text"/>			
$6 \times 1 = 6$			

- 4 Multiply the numbers in the bricks next to each other to find the number for the brick above.



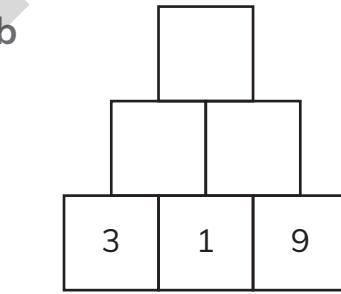
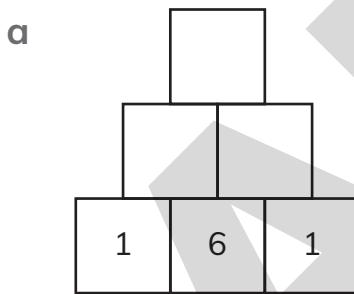
- 5 The term-to-term rule is add 9.

Start at 8 and write the next five numbers in your sequence.

8, , , , ,

### Practice

- 6 Multiply the numbers in the bricks next to each other to find the number for the brick above.



- 7 Ruby the red kangaroo jumps 9 metres in each jump.  
How far does she travel with seven jumps?

