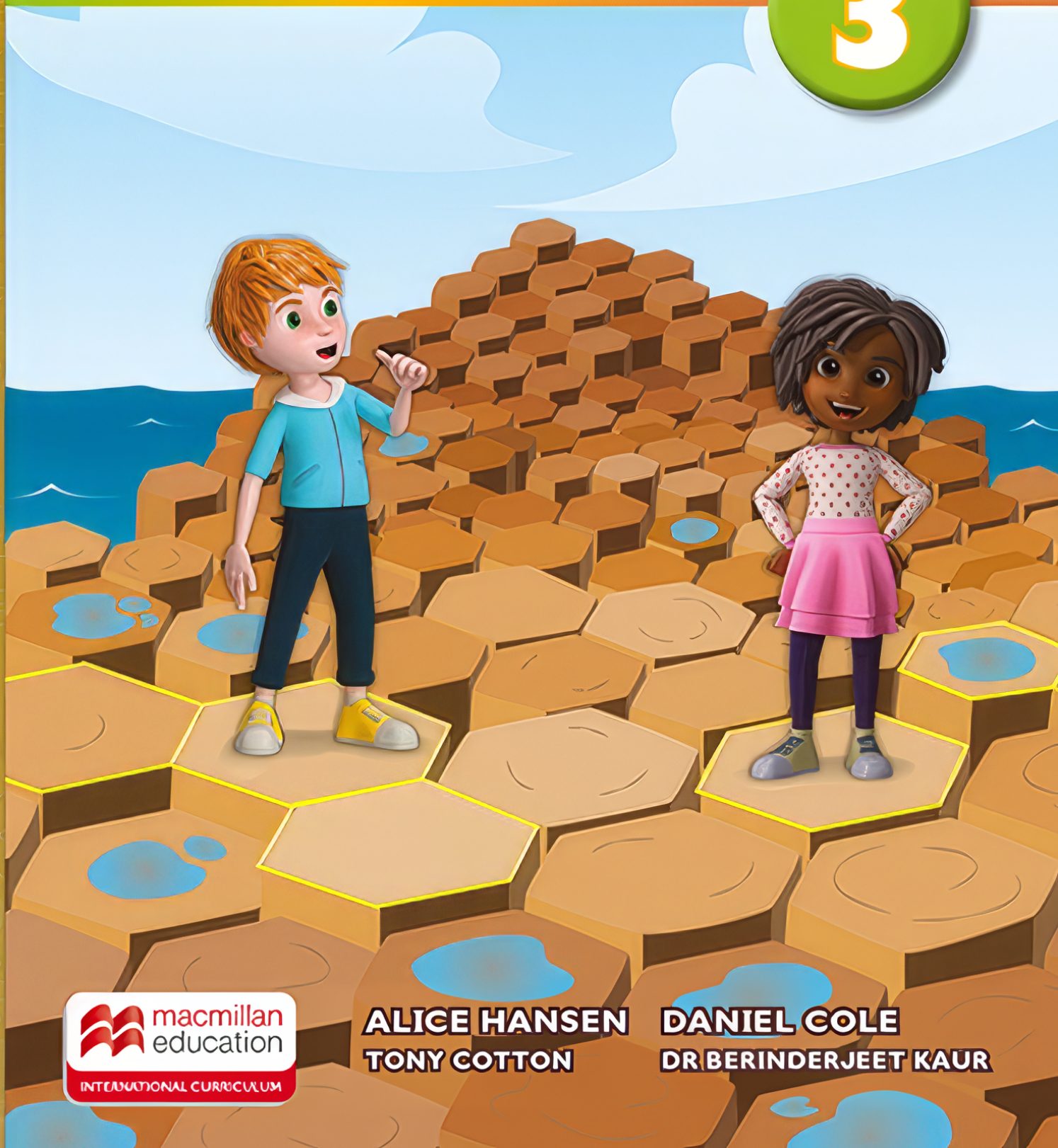
max maths primary

A SINGAPORE APPROACH

Student Book 3



ALICE HANSEN
DANIEL COLE
TONY COTTON
DR BERINDERJEET KAUR

macmillan education
INTERNATIONAL CURRICULUM

max maths primary

A SINGAPORE APPROACH

Student Book 3

ALICE HANSEN DANIEL COLE
TONY COTTON DR BERINDERJEET KAUR

macmillan education
INTERNATIONAL CURRICULUM

Macmillan Education
4 Crinan Street
London, N1 9XW
A division of Macmillan Publishers Limited

Companies and representatives throughout the world

www.macmillanic.com

ISBN 978-1-380-01265-4

First published 2018

Page layout, illustrations and picture research by Star Publishing Pte Ltd
Cover design by Macmillan Education
Cover illustration by Daniel Limon/Beehive Illustration Ltd

Printed and bound in the UK

2022 2021 2020 2019 2018
10 9 8 7 6 5 4 3 2 1

The authors and publishers would like to thank the following for permission to reproduce their images.

© **Stockdisc Royalty Free Photos**/© Stockdisc Royalty Free Photos pp81(l), 197(tr)
Bananastock/p211(tl)
Brand X/pp81(r), 124(t), 150(c), 191(tr), 229(br), 231(flower)
Comstock Images/pp129(t), 134(cr), 162(apple), 175(comb), 186(t), 188(tl)
Corbis/pp96(tl), 189(tl), 230(bc)
E+/Michael Phillips p236(bl)
Eyewire/Getty Images pp108(b), 109(t), 175(t)
Fancy/p136(tr)
Getty/pp32, 104(tl, bl), 126(t), 150(t), 159(t), 160(t), 161(tr), 167(t), 172(c), 180(t), 186(b), 187(tr, tcl), 197(tl, bm), 211(tmr), 228(br), 229(br), GETTY/Photodisc pp53(t), 237(tr), 240(r)
Getty Images/iStockphoto/Thinkstock/abimages p174(bl), Getty Images/eli_asenova p164(t), Getty Images/iStockphoto Thinkstock Images/RuthBlack p188(tr), Getty Images Thinkstock Images/Michael Blann p230(t), Getty Images/iStockphoto Thinkstock Images/BLUEXHAND p174(t), Getty Images/iStockphoto Thinkstock Images/Coprid pp128(fishbowl), 134(tl), 199(r), Getty Images/Westend61/Creativ Studio Heinemann p189(tr), Getty Images/iStockphoto Thinkstock Images/creisinger p120(bmr), Getty Images/iStockphoto/Thinkstock/alejandro rodolfo dans p142, Getty Images/iStockphoto/Thinkstock/Davidenko Andrey p102(cr), Getty Images/iStockphoto/Thinkstock/Laurent davoust p187(tl), Getty Images/iStockphoto/Eshma p192(cr), Getty Images/Radius Images/Jason Friend p104(br), Getty Images/EyeEm/Danielle Haasjes/EyeEm p120(tmr), Getty Images/Thinkstock/Hemera Technologies pp236(t), 237(t), 238, 240(l), Getty Images/Hemera/Thinkstock/Pekka Jaakkola p164(br), Getty Images/iStockphoto/johny007pan pp179(b), 211(tr), Getty Images/Dorling Kindersley RF Thinkstock Images/Dave King p120(tl), Getty Images/iStockphoto/LightSecond p175(b), Getty Images/iStockphoto/PetrMalyshev p178(tr), Getty Images/iStockphoto Thinkstock Images/Oleksiy Mark pp96(bcl), 187(bcl), Getty Images/iStockphoto Thinkstock Images/Anzor Mizaushev p187(b), Getty Images/Hemera/Thinkstock/Ann Murie p120(tr), Getty Images/iStockphoto Thinkstock Images/Ociacia p120(br), Getty Images Thinkstock Images/PhotoObjects.net p134(cl), Getty Images/Siede Preis p130(t), Getty Images/iStockphoto/DanielPrudek p102(cl), Getty Images/iStockphoto Thinkstock Images/rambo182 p172(tc), Getty Images/iStockphoto/scisettialfio pp188(bl), 196(plastic bottle), 197(br), 199(l)
Image Source/Image Source/Bjarte Rettedal pp197(bl), 211(bml), Image Soucre/www.imagesource.com/www.imagesource.com pp127(t), 211(bl)
Macmillan Publishers Limited/Paul Bricknell pp120(tml, bl), 175(tc), 187(cr), 228(tl, box), Macmillan Publishers Limited/Haddon Davies p134(bl), Macmillan Publishers Limited/David Tolley/Rob Judges pp174(ruler), 176, 178(ruler), Macmillan Publishers Limited/Lisa Payne p96(tcl), Macmillan Publishers Limited/David Tolley p138(t)
Macmillan Australia/Andy Craig and Nives Porcellato pp35(t), 212(t)
Official Windows Magazine/Thinkstock Images/Official Windows Magazine p192(tr)
Photodisc/pp128(t), 130(b), 134(tl), 148(t), 190(bl), 191(b), 211(bmr, br), Photodisc/Getty Images pp96(bl), 120(bml), 132, 144(tr), 148(b), 153, 166, 178(photo frame), 182, 211(tml), 212(bl, br), 236(bm, br), Photodisc/Getty Images/Don Farrall p102(tr), Photodisc/Getty Images/Robert Glusic p104(tr)
PublicDomainPictures.net/Robert Kraft p102(br)
Stockbyte/pp96(cl), 120(tl), 172(b), 188(br), 197(tm), Stockbyte/Kaz Chiba p102(tl), Stockbyte/PunchStock p102(bl)
Studio 8/p228(cl)

Contents

Preface

max maths Primary – **A Singapore Approach** is a mathematics course specially designed to meet the needs of learners following the **Cambridge Primary** curriculum framework in Stages 1 to 6.

The **Max Maths Primary** student books guide learners through key mathematical concepts, addressing the learning objectives in the **Cambridge Primary** curriculum framework. Each topic begins with an engaging introduction followed by scaffolded activities that ensure learners have grasped the necessary concepts, skills and knowledge. A variety of exercises, games and cooperative learning activities are included in each chapter to reinforce problem-solving skills and provide the opportunity for learners to develop their content knowledge.

Student book features

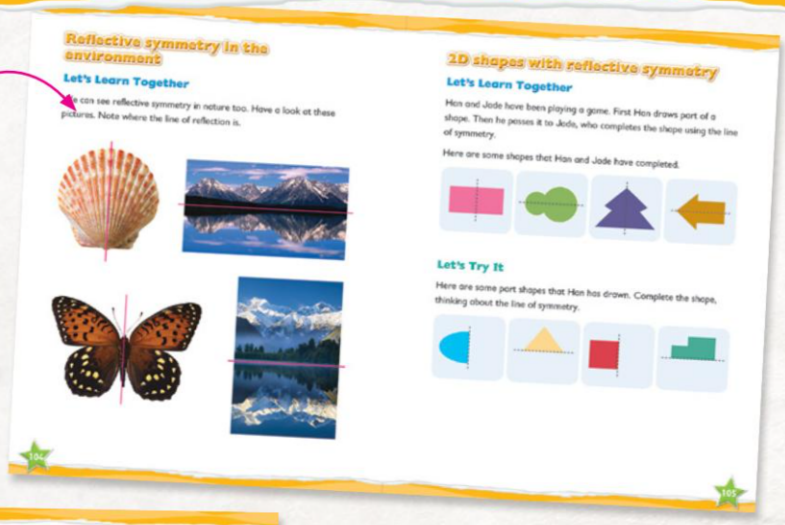
Chapter openers
Each chapter is introduced with clearly defined learning objectives and provides a real-world context for teachers to facilitate discussion with the class.

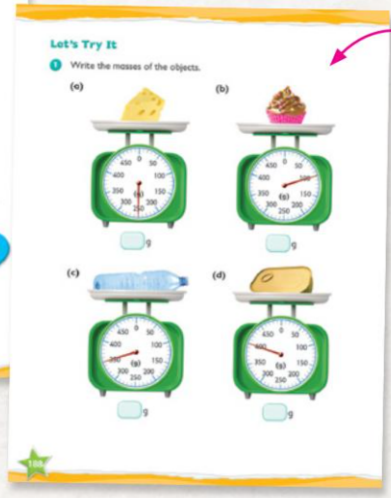
The Max Maths team

Samir **Jade** **Toby** **Padma** **Han** **Tya**

Engaging photographs and illustrations

Colourful illustrations and photographs help to engage learners and encourage an enthusiastic approach to learning mathematics.



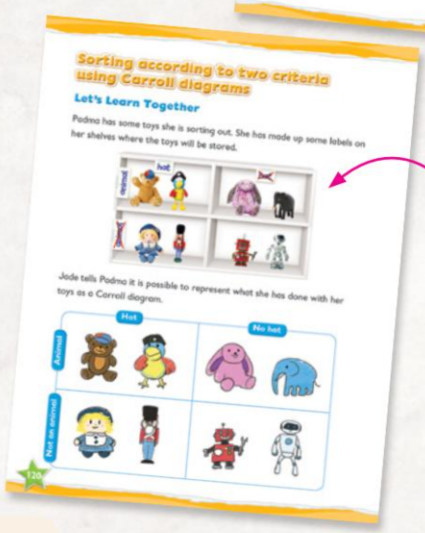


Scaffolded learning

Each mathematics topic provides scaffolding for learners ensuring they have a solid grasp of each topic before practising and applying concepts learnt.

Cooperative learning

Games, activities and challenging problem-solving questions encourage cooperative learning and make learning mathematics fun and exciting.



Cambridge Primary curriculum framework

In the spirit of the Cambridge Primary curriculum framework, practical activities that encourage conceptual understanding and problem-solving are included.

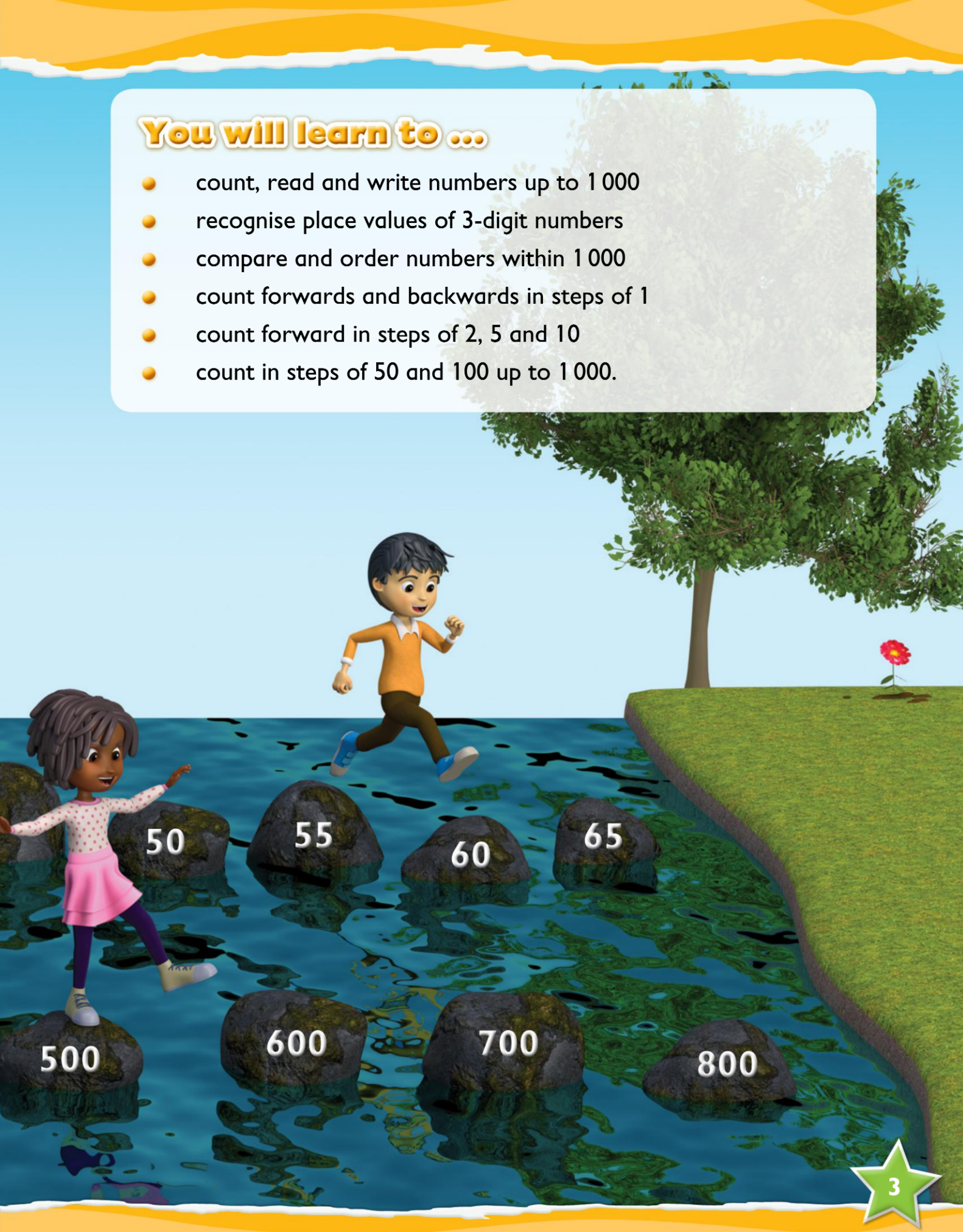
Workbook links

Workbook links provide guidance to teachers and learners by directing them to the corresponding activities in the workbook.

1 Numbers up to 1 000

You will learn to ...

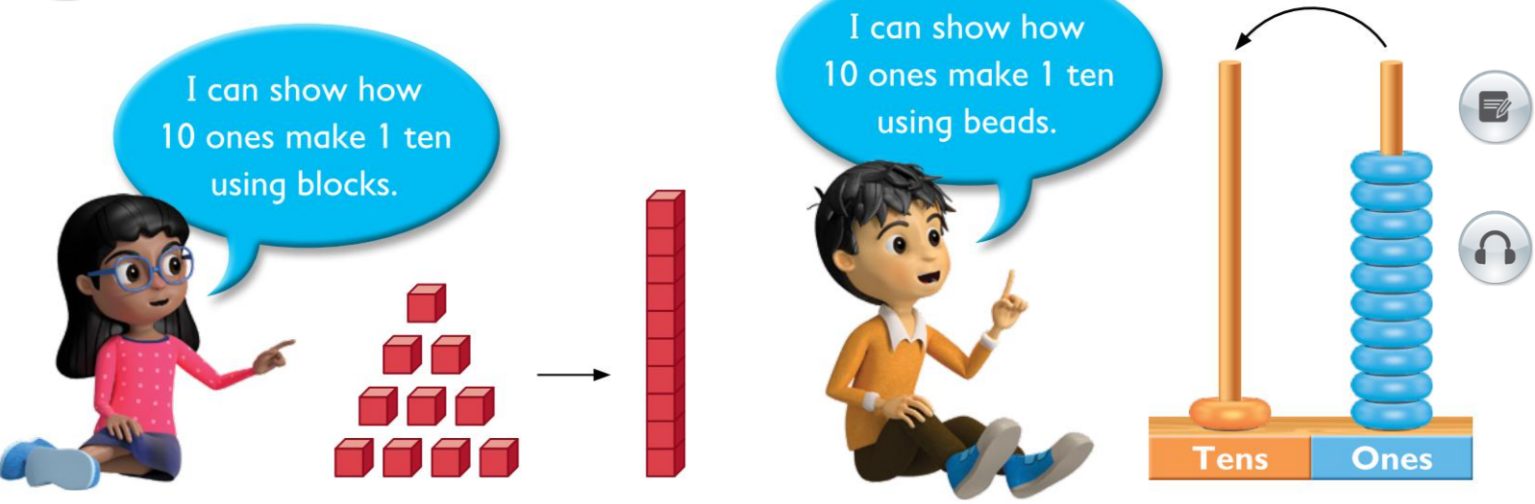
- count, read and write numbers up to 1 000
- recognise place values of 3-digit numbers
- compare and order numbers within 1 000
- count forwards and backwards in steps of 1
- count forward in steps of 2, 5 and 10
- count in steps of 50 and 100 up to 1 000.



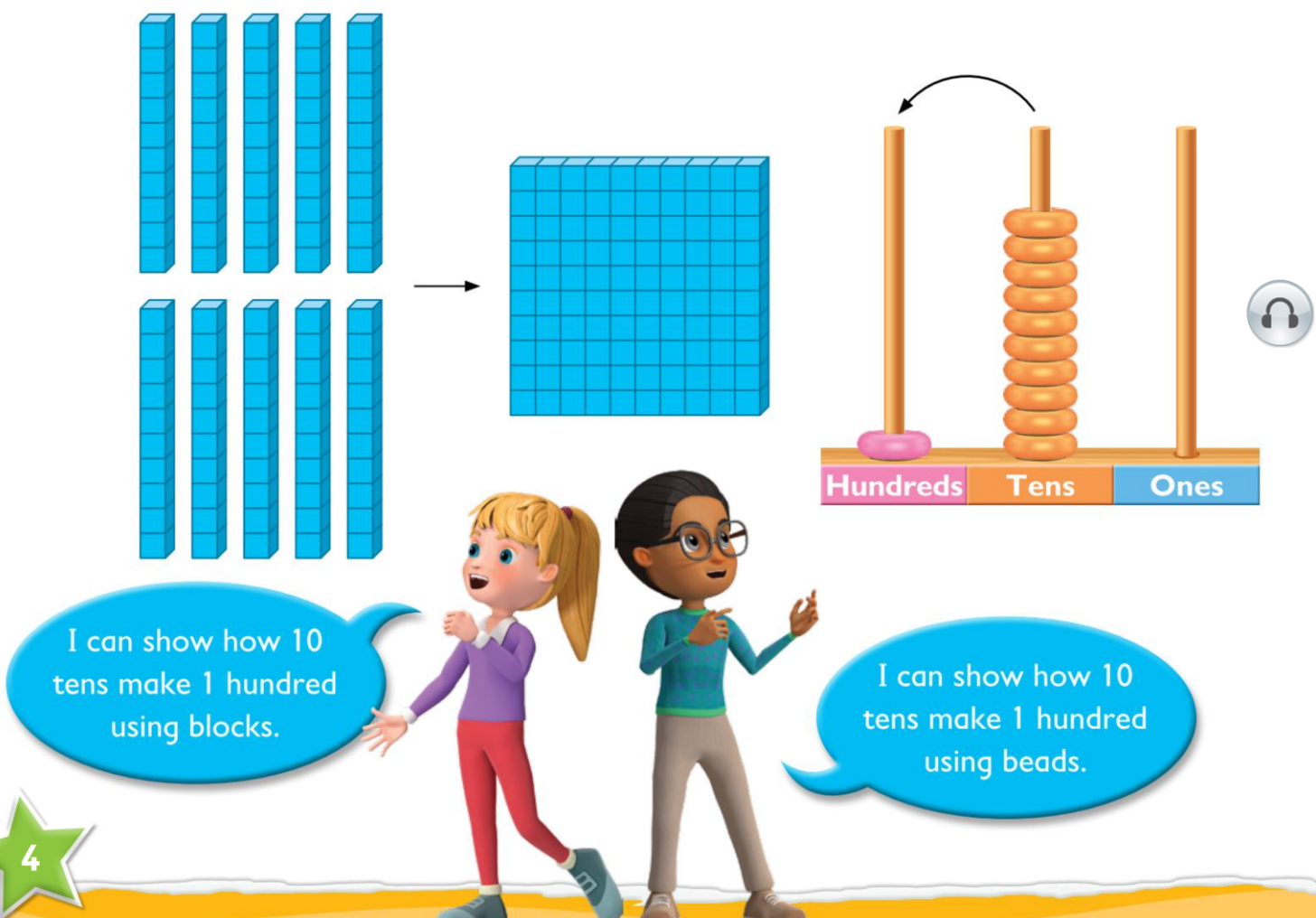
Counting up to 1 000

Let's Learn Together

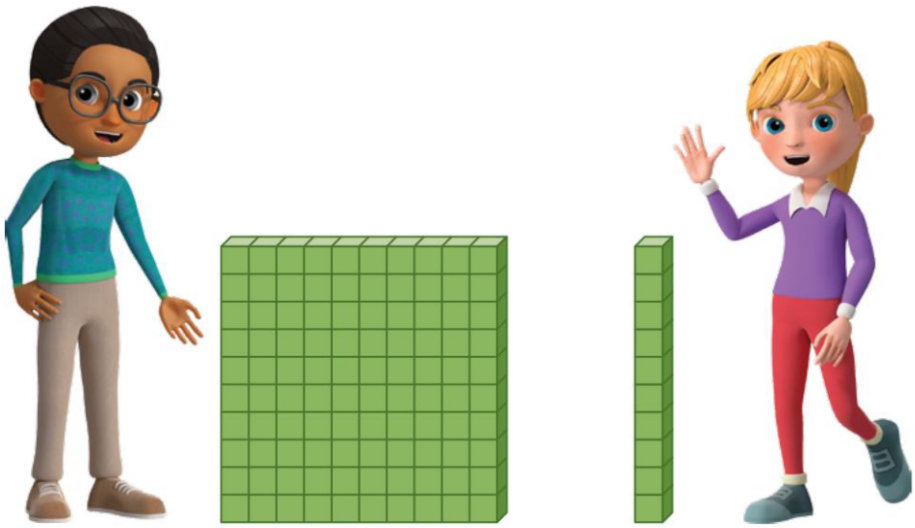
1 Recall that 10 ones make 1 ten.



Also recall that 10 tens make 1 hundred.



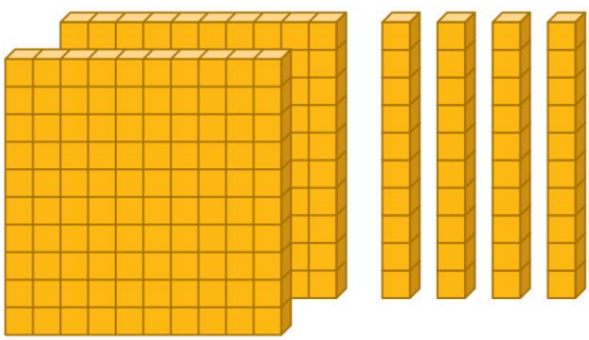
2 Samir has 100 blocks. Jade has 10 blocks. What number do they make with these blocks altogether?

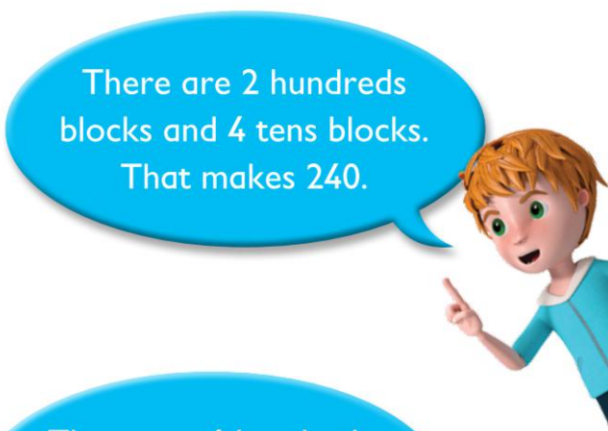


100 and 10 make 110. They make 110 with these blocks. We say this number as 'one hundred and ten'.

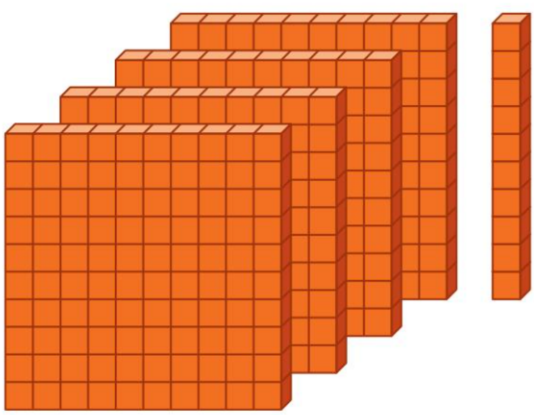
3 Look at the blocks below. Can you write and say the numbers?

(a)

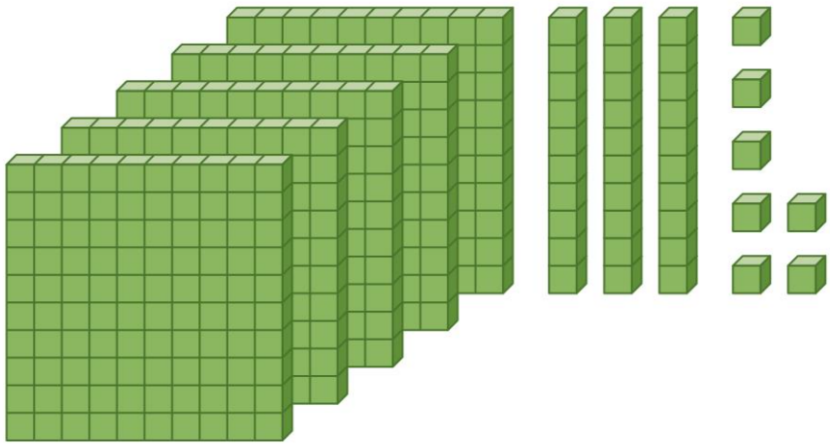




(b)

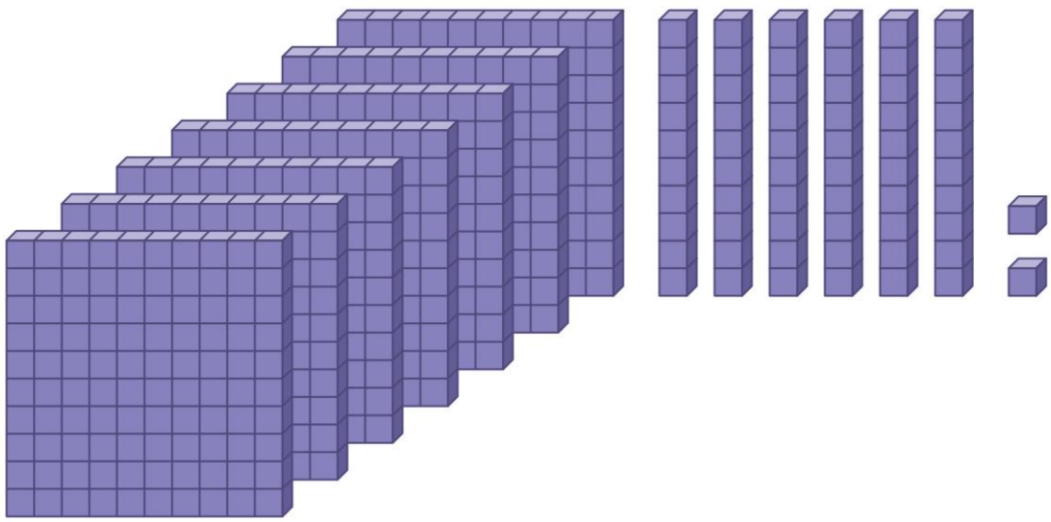


(c)



There are 5 hundreds, 3 tens and 7 ones. That makes 537.
We say this number as 'five hundred and thirty-seven'.

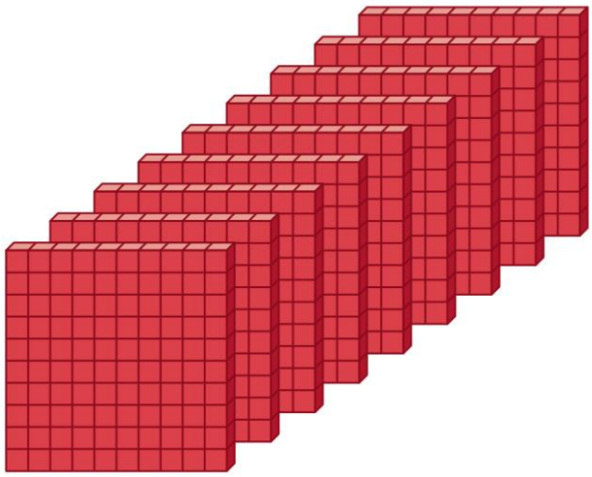
(d)

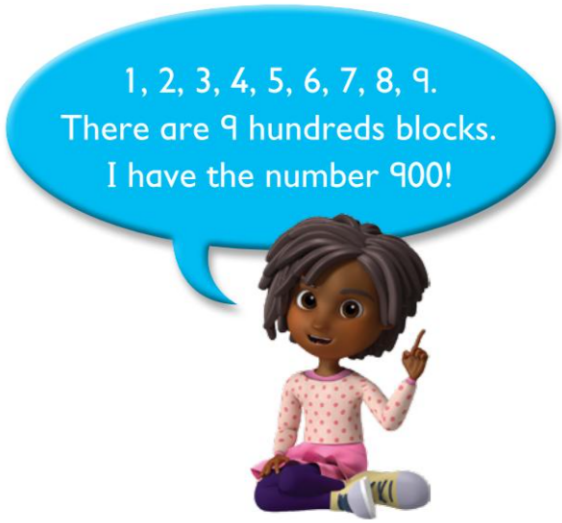


There are 7 hundreds, 6 tens and 2 ones. That makes 762.
We say this number as 'seven hundred and sixty-two'.

Go to WB pages 2 to 4

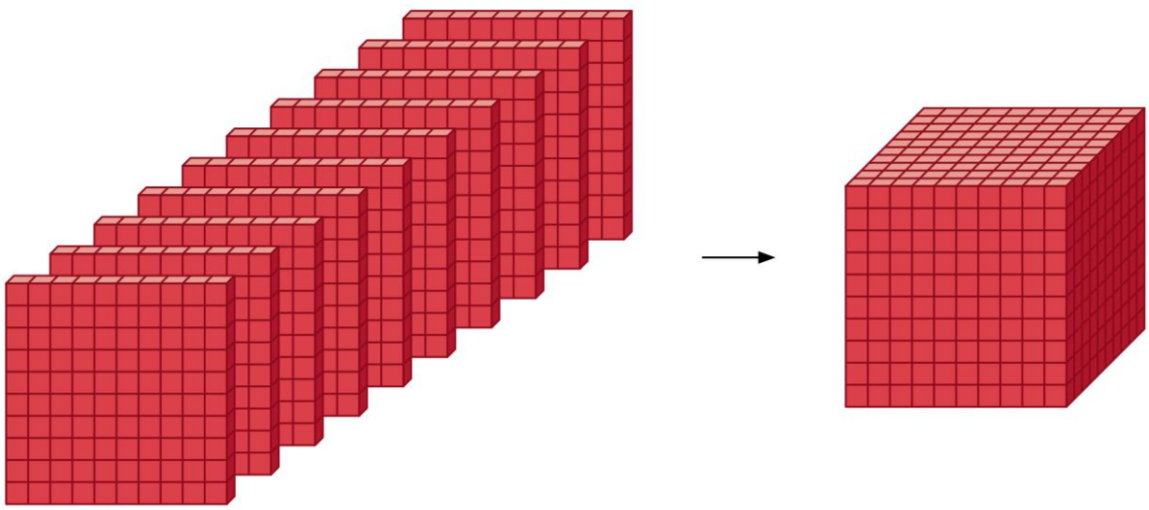
4 Tya makes a number with counting blocks.





Tya makes the number 900.

Jade adds 1 more hundred block to Tya's counting blocks.
How many blocks are there now?

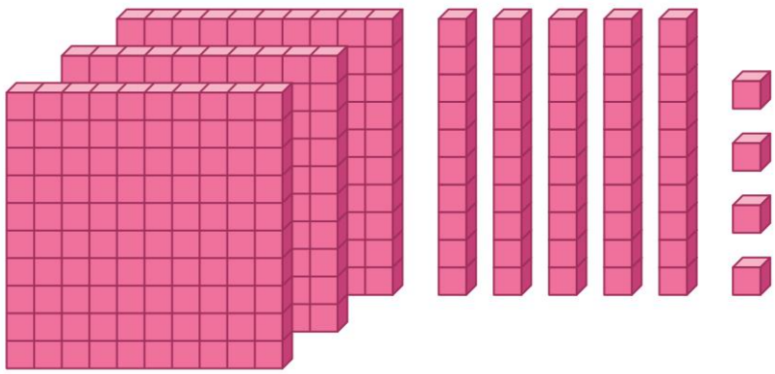


There are 1 000 blocks now. We say this as 'one thousand'.

Let's Try It

1 Complete the following.

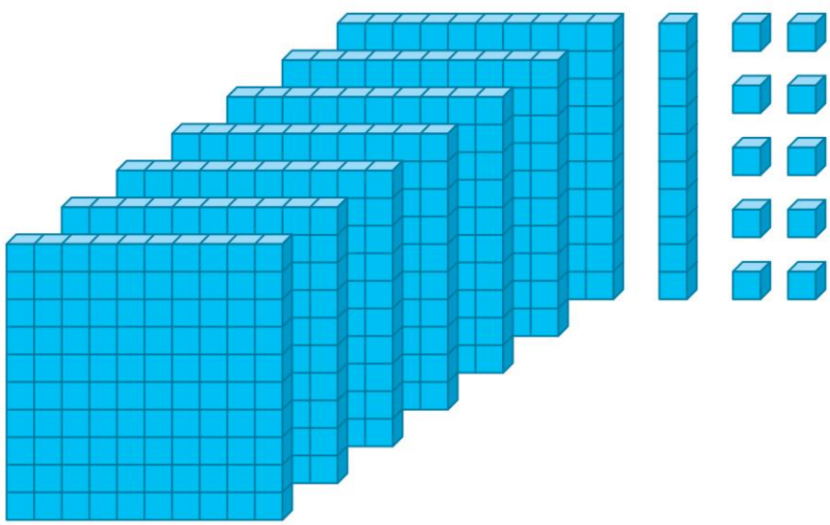
(a)



There are [3] hundreds, [5] tens and [4] ones.

There are [ ] blocks altogether.

(b)



There are [7] hundreds, [ ] tens and [ ] ones.

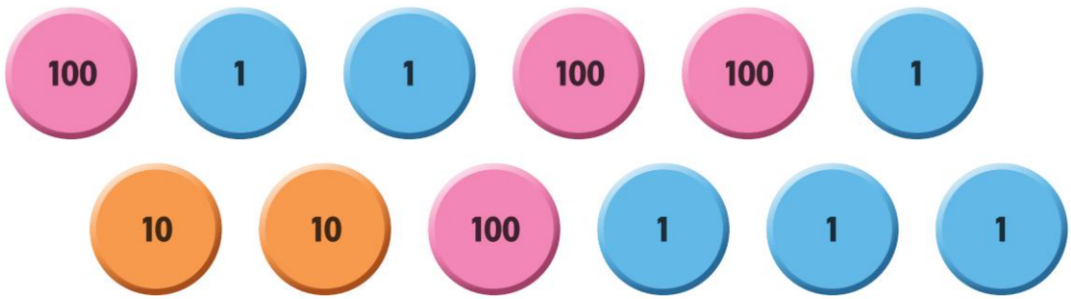
There are [ ] blocks altogether.

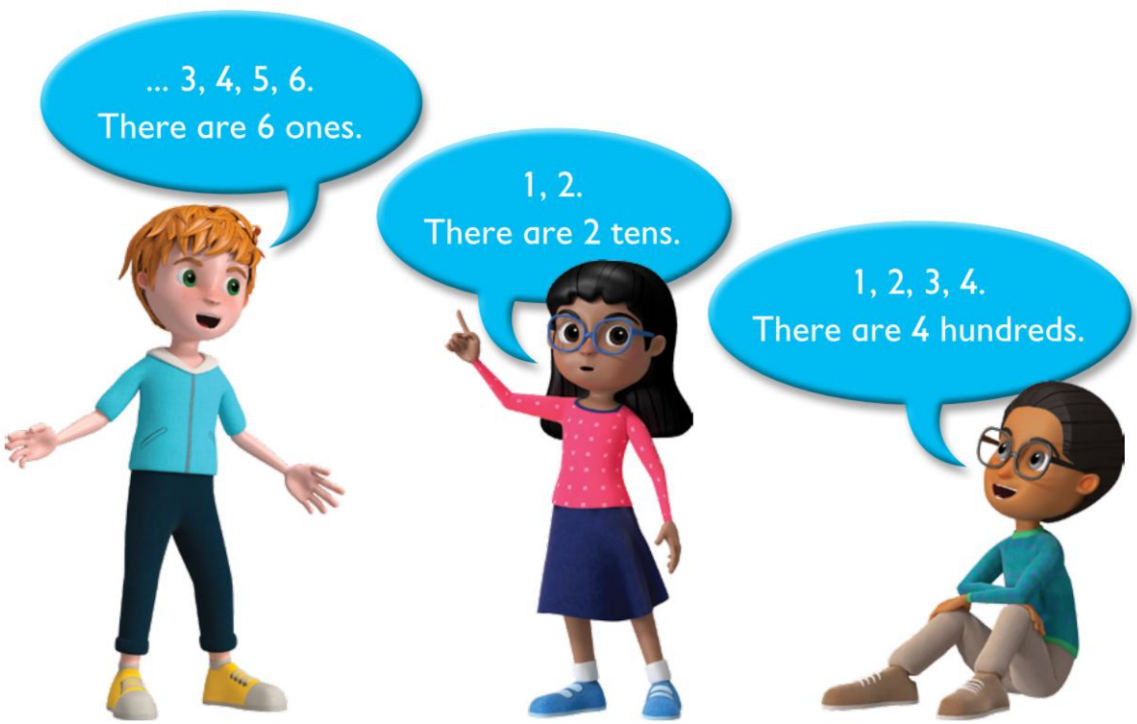
Go to WB page 5

Place value

Let's Learn Together

1 Look at the numbers on the counters. What number do they represent?





Let's show the number in a place-value chart.

Hundreds	Tens	Ones
4	2	6

400
20
6
426

2 Look at the number in the place-value chart.
Find the value of each digit.

(a)

Hundreds	Tens	Ones
1	9	5

100
90
5
195

(b)

Hundreds	Tens	Ones
5	7	1

500
70
1
571

(c)

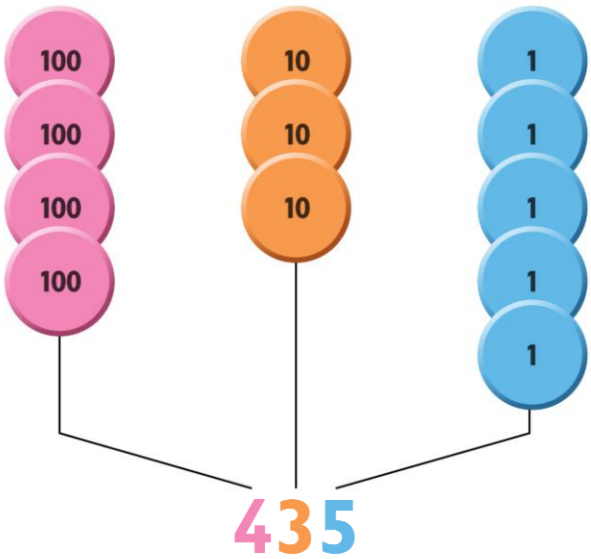
Hundreds	Tens	Ones
9	8	4

900
80
4
984

Go to WB pages 6 to 7

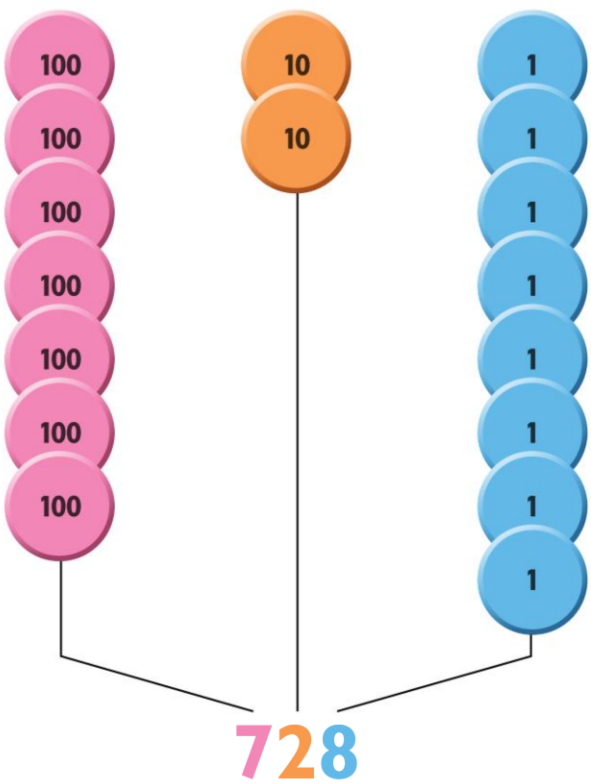
3 Look at how the numbers on the counters represent the numbers.

(a)



Four hundred and thirty-five

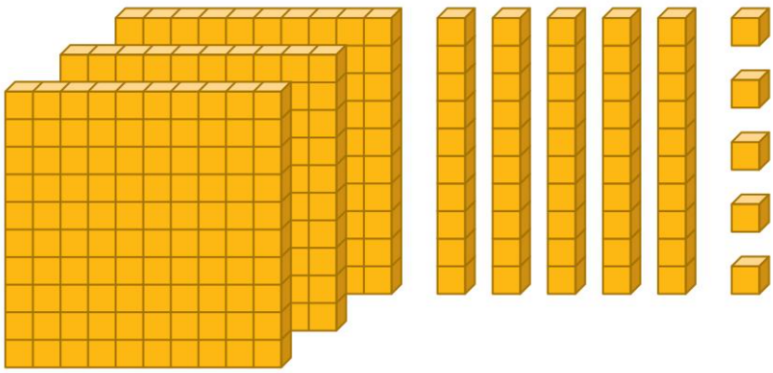
(b)



Seven hundred and twenty-eight

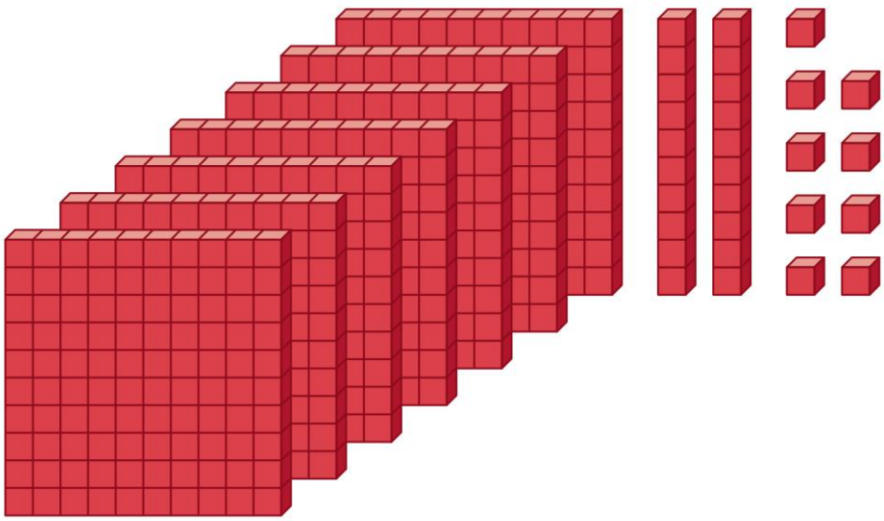
Let's Try It

(a)



Hundreds	Tens	Ones

(b)



Hundreds	Tens	Ones

Go to WB pages 8 to 10

Let's Practise

Fill in the blanks.

(a) 729

The digit **7** is in the **Hundreds** place and it represents ____.

The digit **2** is in the **Tens** place and it represents ____.

The digit **9** is in the **Ones** place and it represents ____.

(b) 105

The digit **1** is in the **Hundreds** place and it represents ____.

The digit **0** is in the **Tens** place and it represents ____.

The digit **5** is in the **Ones** place and it represents ____.

(c) 481

The digit **4** is in the **Hundreds** place and it represents ____.

The digit **8** is in the **Tens** place and it represents ____.

The digit **1** is in the **Ones** place and it represents ____.

(d) 536

The digit **5** is in the **Hundreds** place and it represents ____.

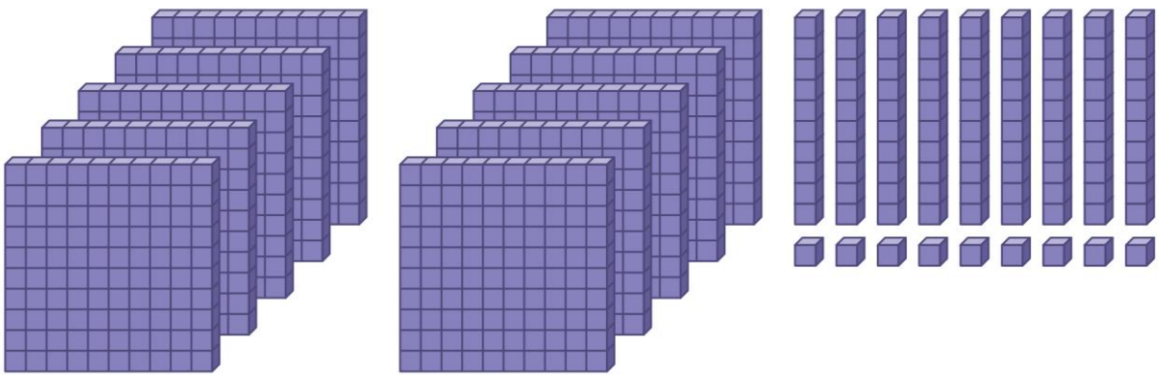
The digit **3** is in the **Tens** place and it represents ____.

The digit **6** is in the **Ones** place and it represents ____.

Go to WB pages 11 to 12

Heads Together

Your teacher will give you a set of counting blocks like the ones shown below.



Your teacher will then call out a number between 100 and 1 000. As quickly as you can, show the number using blocks. Put up your hand when you have finished making the number.

The first group to show the number correctly gets 1 point.

The first group to reach 10 points is the winner.

Comparing and ordering numbers up to 1 000

Let's Learn Together

1 Padma and Toby bought some seeds from the market. Padma bought sunflower seeds and Toby bought pumpkin seeds.

They each counted their seeds. Padma had 159 sunflower seeds and Toby had 204 pumpkin seeds. Who has more seeds?

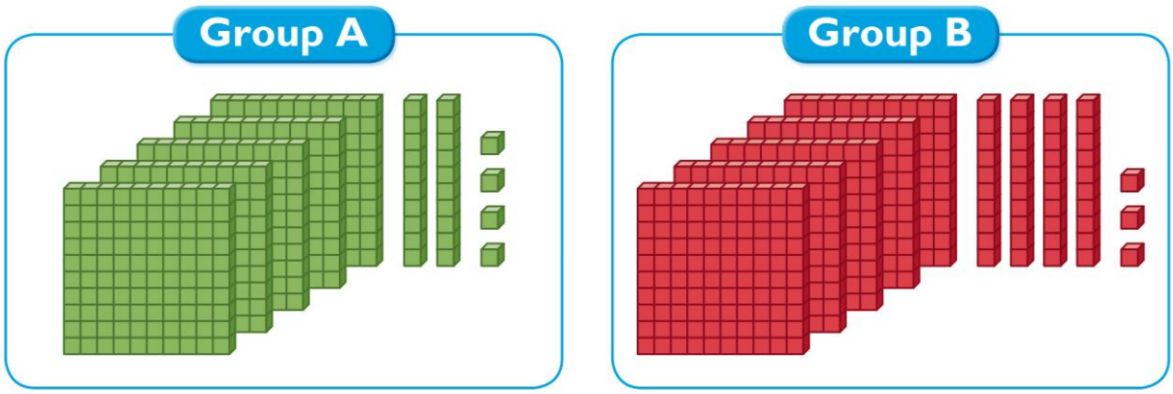
Let's write the numbers in a place-value chart and compare them.

Hundreds	Tens	Ones
1	5	9
2	0	4

First, compare the hundreds.
2 hundreds are greater than 1 hundred. So, 204 is greater than 159.

Toby has more seeds than Padma.

2 Find the number of blocks in each group. Then find the greater number.



There are 524 blocks in Group A. There are 543 blocks in Group B. Let's compare the hundreds.

Group A and Group B each have 5 hundreds.
We must move on to compare the tens.

Group A has 2 tens. Group B has 4 tens.
Group B has more tens than Group A.
So, the number in Group B is greater than that in Group A.

Go to WB page 13

3 Find the greater number.

(a) 231 and 132

2 hundreds is greater than 1 hundred.

231 is greater than 132.

(b) 479 and 480

Both numbers have 4 hundreds. So, we compare the tens.

8 tens is greater than 7 tens.

480 is greater than 479.

(c) 760 and 765

Both numbers have 7 hundreds. So, we compare the tens.

Both numbers have 6 tens. So, we compare the ones.

5 ones is greater than 0 ones.

765 is greater than 760.

4 Find the smaller number.

(a) 600 and 499

4 hundreds is less than 6 hundreds.

499 is smaller than 600.

(b) 972 and 982

Both numbers have 9 hundreds. So, we compare the tens.

7 tens is less than 8 tens.

972 is smaller than 982.

Go to WB pages 14 to 16