



CAMBRIDGE
UNIVERSITY PRESS

CAMBRIDGE Primary Mathematics

Workbook 3

Cherri Moseley & Janet Rees

Contents

How to use this book	5
Thinking and Working Mathematically	6
1 Numbers to 1000	8
1.1 Hundreds, tens and ones	8
1.2 Comparing and ordering	14
1.3 Estimating and rounding	18
2 Statistics: tally charts and frequency tables	23
2.1 Tally charts and frequency tables	23
3 Addition, subtraction and money	35
3.1 Addition	35
3.2 Subtraction	40
3.3 Money	45
4 3D shapes	51
4.1 3D shapes	51
5 Multiplication and division	60
5.1 Exploring multiplication and division	60
5.2 Connecting $2\times$, $4\times$ and $8\times$	65
5.3 Connecting $3\times$, $6\times$ and $9\times$	69
6 Measurement, area and perimeter	74
6.1 Measurement	74
6.2 2D shapes and perimeter	82
6.3 Introducing area	90
7 Fractions of shapes	97
7.1 Fractions and equivalence of shapes	97
8 Time	104
8.1 Time	104

9	More addition and subtraction	109
9.1	Addition: regrouping tens and reordering	109
9.2	Subtraction: regrouping tens	115
9.3	Complements	120
10	Graphs	126
10.1	Pictograms and bar charts	126
10.2	Venn and Carroll diagrams	139
11	More multiplication and division	152
11.1	Revisiting multiplication and division	152
11.2	Playing with multiplication and division	155
11.3	Extending multiplication and division	159
12	More fractions	165
12.1	Fractions of numbers	165
12.2	Ordering and comparing fractions	170
12.3	Calculating with fractions	175
13	Measures	179
13.1	Mass	179
13.2	Capacity	186
13.3	Temperature	192
14	Time (2)	202
14.1	Time	202
14.2	Timetables	209
15	Angles and movement	218
15.1	Angles, direction, position and movement	218
16	Chance	229
16.1	Chance	229
17	Pattern and symmetry	237
17.1	Shape and symmetry	237
17.2	Pattern and symmetry	244
	Acknowledgements	249

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. Your teacher will tell you which parts to do.

You will also find these features:

Important words that you will use. →

compose decompose
exchange regroup single

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

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.



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

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

①64	_____	23⑦	_____
31⑤	_____	1②8	_____
④52	_____	3⑧1	_____

Thinking and Working Mathematically

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



Specialising
is when I choose an example and check to see if it satisfies or does not satisfy specific mathematical criteria.

Characterising
is when I identify and describe the mathematical properties of an object.

Generalising
is when I recognise an underlying pattern by identifying many examples that satisfy the same mathematical criteria.

Classifying
is when I organise objects into groups according to their mathematical properties.



Critiquing is when I compare and evaluate mathematical ideas, representations or solutions to identify advantages and disadvantages.

Improving is when I refine mathematical ideas or representations to develop a more effective approach or solution.

Conjecturing is when I form mathematical questions or ideas.

Convincing is when I present evidence to justify or challenge a mathematical idea or solution.



> 1.1 Hundreds, tens and ones

Exercise 1.1

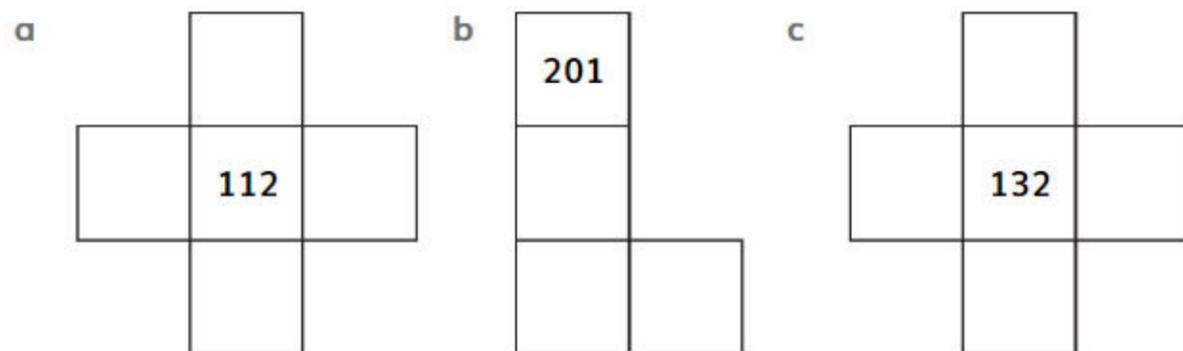
Focus

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									

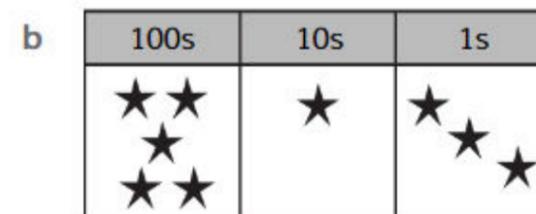
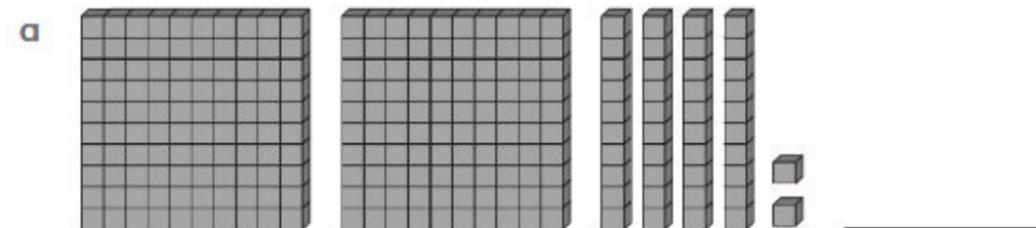
- 2 Complete these pieces from a 1 to 1000 number strip.



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

Now write this number in words.

- 4 What 3-digit numbers are represented below?



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

①64 _____ 23⑦ _____

31⑤ _____ 1②8 _____

④52 _____ 3⑧1 _____

Which hundreds values have not been used in these numbers?

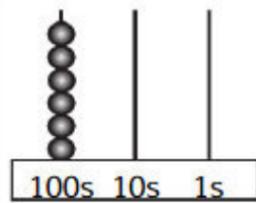
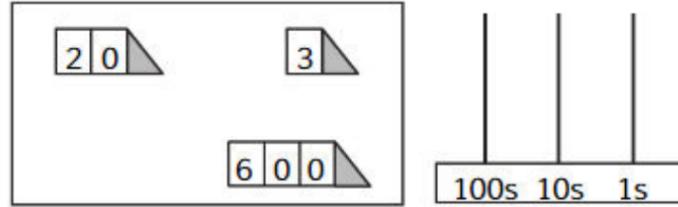
Practice

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

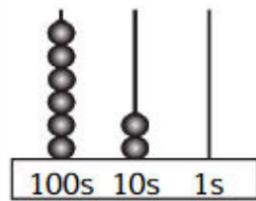
351	352	353	354	355	356	357	358	359	360

Worked example 1

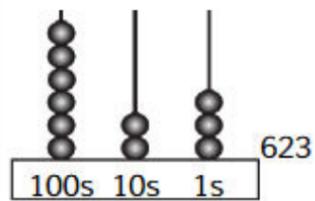
Draw beads on the abacus to show this 3-digit number.



Draw six beads on the 100s tower to represent 600.

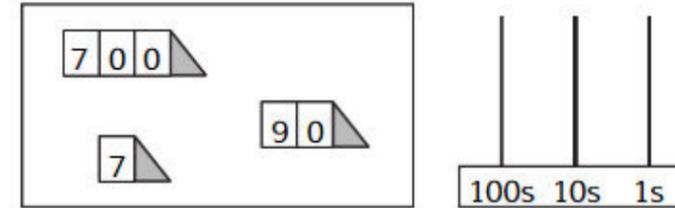
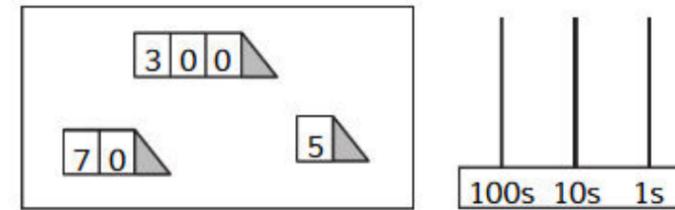


Draw two beads on the 10s tower to represent 20.

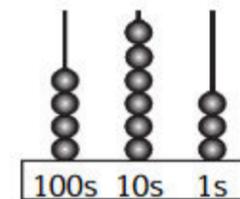
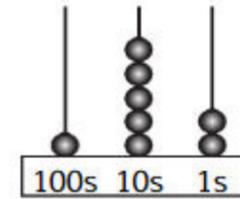


Draw three beads on the 1s tower for 3.
Together, the beads represent the 3-digit number 623.

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



8 Which 3-digit number is represented on each abacus? Write each number in words.

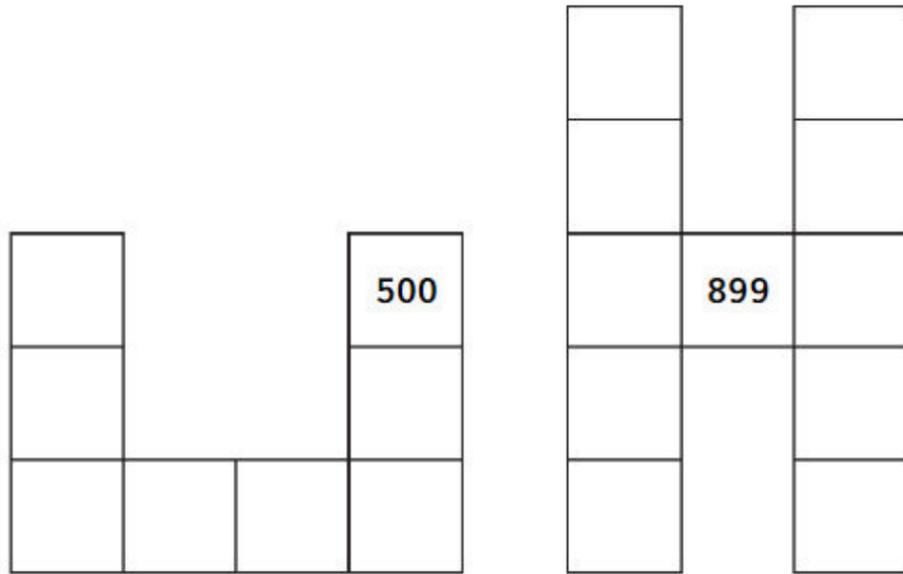


9 Write this 3-digit number in words.

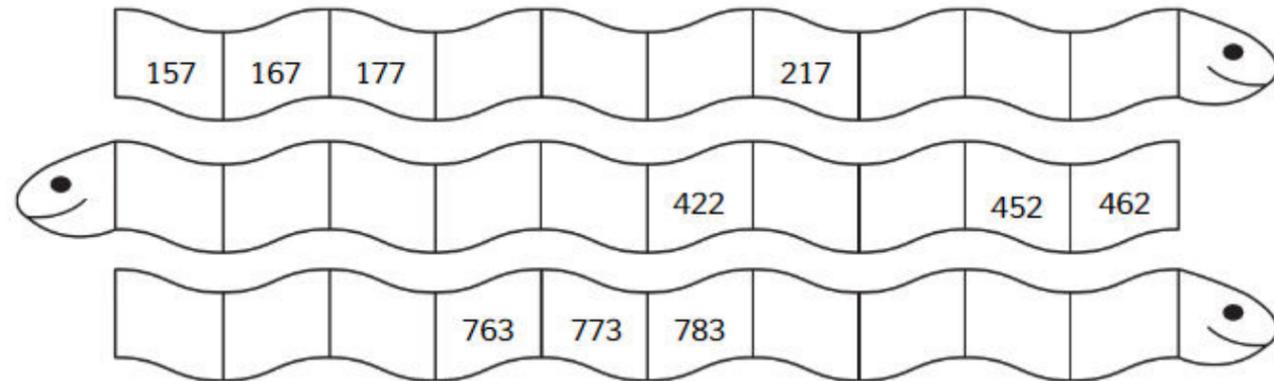
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

Challenge

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



11 Write the missing numbers on each worm.



12



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?

13 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.

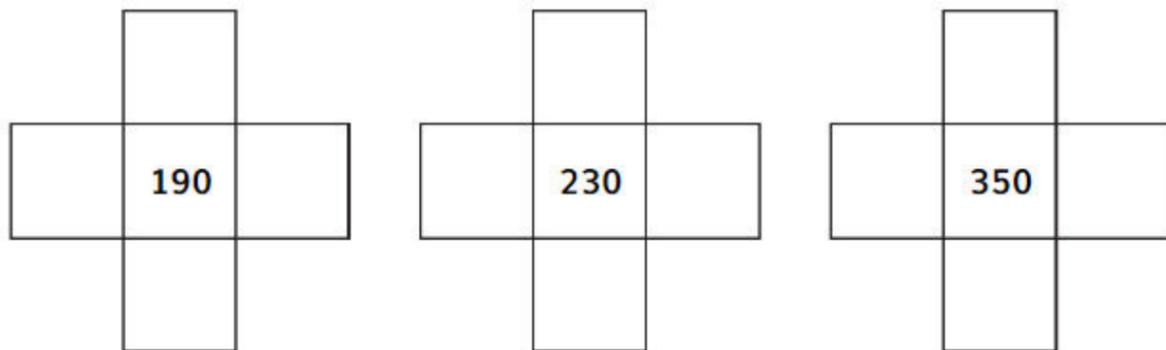
> 1.2 Comparing and ordering

Exercise 1.2

inequality is greater than, >
is less than, <

Focus

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



2 Compare these numbers and complete the sentences.

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

_____ is less than _____ and

_____ is greater than _____.

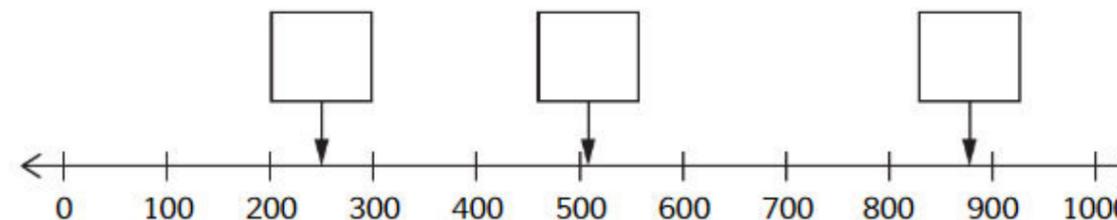
3 Write the statements in question 2 using the symbols < and >.

4 Order these numbers from smallest to greatest.



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.

100s	10s	1s
4	5	6
4	6	5

7 Order these numbers from greatest to smallest.



greatest smallest