Alavi

Mathematics

Learner's Book

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Introduction

The Primary Mathematics brings together the world-class Cambridge Primary mathematics curriculum from Cambridge International Examinations. It is an innovative combination of curriculum and resources designed to support teachers and learners to success in primary mathematics through best-practice international maths teaching and a problem-solving approach.

The Cambridge curriculum is dedicated to helping schools develop learners who are confident, responsible, reflective, innovative and engaged. To this end, the textbooks provide support based on pedagogical practice found in successful schools around the world. This series is arranged to ensure that the curriculum is covered whilst allowing teachers to use a flexible approach.

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What learners will learn and reinforce

The activities in this chapter give learners practice in the following topics:

Topic	In this topic, learners will:
1.1. Numbers	read, write and partition numbers.
1.2. Ordering, rounding and comparing	practise ordering, rounding and comparing 4-digit numbers.
1.3. Using multiplication facts	identify multiples of 2 and 5.
1.4. Input/ Output machines	identify the pattern rule that relates an input to an output.

Word bank

1	digit	2	partition	3	place value	4	thousands	5	hundreds
6	tens	7	units (ones)	8	more than	9	greater than	10	less than
11	the same	12	round to	13	the nearest	14	multiple	15	input
16	output	17	pattern rule						

✳ 1.1. Numbers

Pablo has these digit cards.

He makes three-digit numbers with the cards.

Write down all the numbers he could make.

1 8 7

Remember

Whole numbers from 1000 to 9999 have four digits.
The position of a digit in a number gives its value.

Th	H	T	U
9	8	4	3

Read as nine thousand, eight hundred and forty three.

Write each number in words.

a) 2345	b) 3030	c) 2901
d) 7777	e) 2816	f) 9109

Look and learn

◆ Digit: 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 are digits.

◆ Expanded form:
4567 = 4000 + 500 + 60 + 7

◆ Partition: breaking up a number into its parts.

◆ Place value: the value of a digit determined by its position.

In 830, the 3 has a value of 3 tens (30).

H	T	U
8	3	0

◆ Thousand: is a four-digit number that is 10 times larger than a hundred.

Th	H	T	U
1	0	0	0

Write these numbers in figures.

a) nine thousand and nine

b) four thousand and forty

What is the value of 4 in these numbers?

a) 6423	b) 4623	c) 3409
d) 9040	e) 1234	f) 4321

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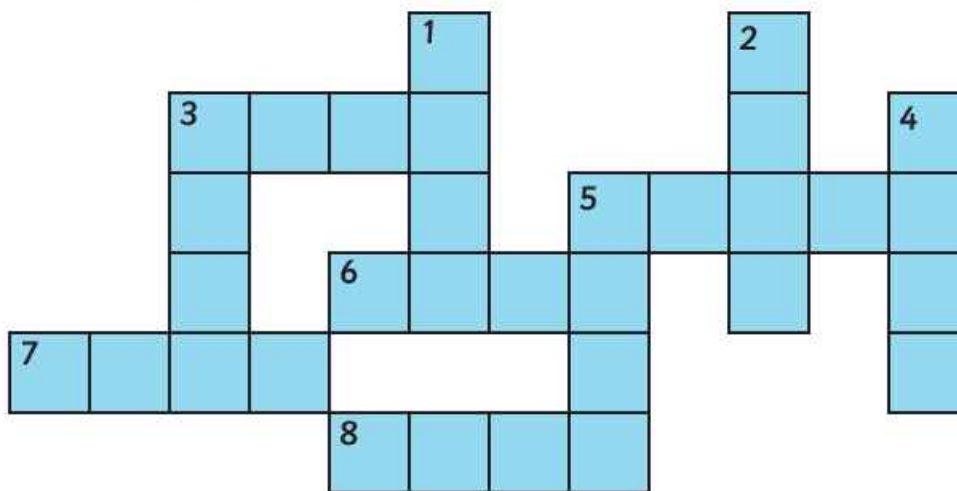
Write the missing numbers.

Hint: these numbers are written in expanded form, in thousands, hundreds, tens and units.

6742 = 6000 + 700 + [____] + 2

6359 = [____] + [____] + [____] + [____]

5419 = 5000 + [____] + [____] + [____]

3278 = [____] + [____] + [____] + [____]

1234 = [____] + [____] + [____] + 4

3507 = [____] + [____] + [____] + [____]

Complete the cross-number puzzle.

Then make a puzzle for someone else to try.

Across

3) nine thousand, nine hundred

5) ten thousand

6) six thousand, four hundred and thirty-nine

7) one thousand, three hundred and forty-eight

8) nine thousand, one hundred and nineteen

Down

1) seven thousand and four

2) six thousand, one hundred and nine

3) nine thousand and sixty-four

4) six thousand and fifty-eight

5) one thousand, nine hundred and nine

Maria writes a number. It has the digit 4 in the hundreds place and the digit 2 in the units place.

Which of these numbers could Maria have written?

5426   4652   4265   5462

Find the missing numbers.

3000 is one hundred less than ⟶ **?** ....

5000 is one hundred more than ⟶ **?** ....

6500 is one thousand more than ⟶ **?** ....

980 is one hundred less than ⟶ **?** ....

Write the number that is 1 more than 9999.

Solve these number riddles.

(a)
I have four digits.

I am more than 2500.

I am less than 3000.

My hundreds digit is 6.

My tens digit is one less than my hundreds digit.

My units digit is 0.

What number am I?

....

(b)
I have four digits.

My units digit and my hundreds digit are the same.

I am less than 9000.

I am greater than 8000.

My tens digit is 4.

My hundreds digit is two more than my tens digit.

What number am I?

....

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✽ 1.2. Ordering, rounding and comparing

Remember

When ordering numbers, compare each digit starting with the digit of greatest place value.

For example, to order the numbers:

5005   550   5505   50

	Th	H	T	U
largest →	5	5	0	5
	5	0	0	5
		5	5	0
smallest →			5	0

✎ When comparing numbers:

< means 'is less than', for example, 5005 < 5505

> means 'is greater than', for example, 5505 > 5005

✎ When rounding numbers to the nearest 10, look at the units digit, so 2364 rounds down to 2360.

✎ When rounding numbers to the nearest 100, look at the tens digit, so 2346 rounds up to 2400.

Ordering numbers

Write these numbers in order, starting with the smallest.

650   6005   6500   650   65

....

Use the < and > signs to make these statements true.

(a) 505 ☐ 550   (b) 660 ☐ 606   (c) 989 ☐ 899

(d) 1234 ☐ 4321   (e) 1009 ☐ 1010   (f) 1001 ☐ 989

(g) 555 ☐ 145   (h) 1365 ☐ 1367   (i) 2912 ☐ 1999

Round these numbers to the nearest 100.

(a) 1060 ➡ ....   (b) 7225 ➡ ....   (c) 4680 ➡ ....

(d) 1007 ➡ ....   (e) 885 ➡ ....   (f) 732 ➡ ....

Hint: it might help to think of the target number on a number line, for example, when rounding 2364 to the nearest 10, you can see that it lies between 2360 and 2370 but is closer to 2360.

2364
2360   2370