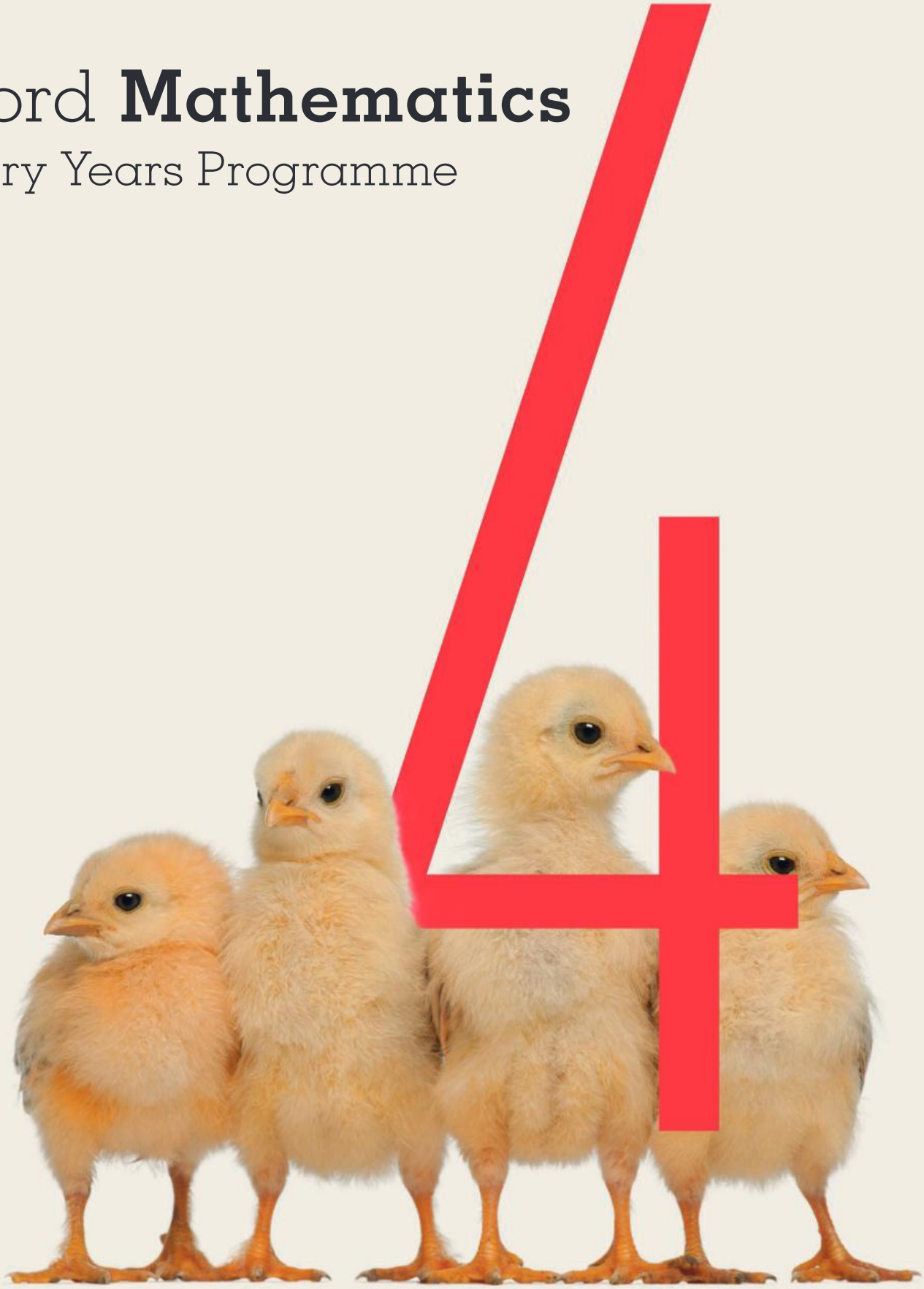
Student Book PYP

Oxford **Mathematics**

Primary Years Programme



Annie Facchinetti

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To the teacher

Oxford Mathematics PYP provides students with guided and independent work to support mathematical skills and understandings, as well as opportunities for problem-solving in real-world contexts. Teachers will find the supporting materials clear, comprehensive and easy to use. While the series offers complete coverage of the PYP mathematics scope and sequence, teachers can also use the topics that fit well with other areas of work to support student learning across the PYP curriculum.

Student Books

Each topic features:

- **Guided practice** – a worked example of the concept, followed by the opportunity for students to practise, supported by careful scaffolding
- **Independent practice** – further opportunities for students to consolidate their understanding of the concept in different ways, with a decreasing amount of scaffolding
- **Extended practice** – the opportunity for students to apply their learning and extend their understanding in new contexts.

Differentiation

Differentiation is key to ensuring that every student can access the curriculum at their point of need. In addition to the gradual release approach of the Student Books, the Teacher Books help teachers to choose appropriate pathways for students, and provide activities for students who require extra support or extension.

Oxford **Mathematics**

Primary Years Programme

4

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23 854
is the same as:

2	ten thousands	3	thousands	8	hundreds	5	tens	4	ones

or

2	3	thousands	8	hundreds	5	tens	4	ones

or

2	3	8	hundreds	5	tens	4	ones

or

2	3	8	5	tens	4	ones

or

2	3	8	5	4	ones

Guided practice

1 Show these numbers on the number expanders.

a 34 926

	ten thousands		thousands		hundreds		tens		ones

		thousands		hundreds		tens		ones

			hundreds		tens		ones

				tens		ones

					ones

b 97 563

	ten thousands		thousands		hundreds		tens		ones

		thousands		hundreds		tens		ones

			hundreds		tens		ones

				tens		ones

					ones

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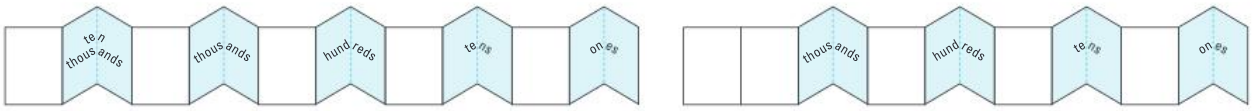
Independent practice

1 Write these numbers on the expanders.

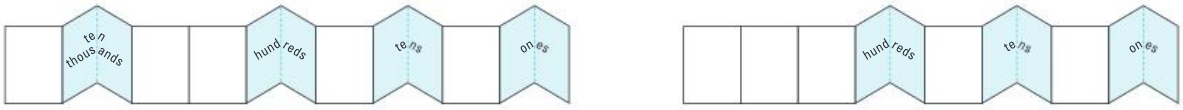
a 17 329

b 80 154

c 64 078



d 49 461



e 28 935

2 Expand each number by place value.

a 51 345 = 50 000 + 1000 + 300 + 40 + 5

b 40 772 = ☐ + ☐ + ☐ + ☐

c 87 024 = ☐ + ☐ + ☐ + ☐

d 17 316 = ☐ + ☐ + ☐ + ☐ + ☐

e 92 603 = ☐ + ☐ + ☐ + ☐

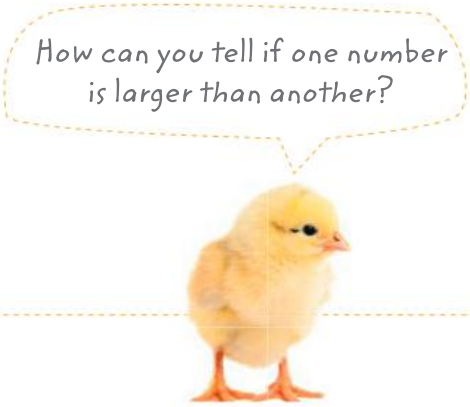
f 55 555 = ☐ + ☐ + ☐ + ☐ + ☐

3 Rewrite from smallest to largest.

WORLD COLLECTION RECORDS

Collection number	Description	Number of items
1	Pairs of earrings	37 706
2	"Do not disturb" signs	11 570
3	Smart phones	1563
4	Dinosaur eggs	10 008
5	Rat and mouse memorabilia	47 398
6	Number plates	11 345
7	Toenail clippings	24 999
8	Magazines	50 953
9	Key chains	47 200
10	Olympic postage stamps	15 183

Collection number	Number of items



4 Write these numbers in words.

a 56 927 _____

b 80 401 _____

c 42 058 _____

5 Write the numerals for these numbers.

a Sixty-eight thousand, one hundred and forty-two _____

b Twenty-four thousand and seventy _____

c Ninety thousand and three _____

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Extended practice

1 Round up or down to the nearest 10.

a 73 ____ **b** 28 ____ **c** 1364 _____ **d** 62 147 _____

2 Round up or down to the nearest 100.

a 591 _____ **b** 1603 _____ **c** 21 977 _____

3 Round up or down to the nearest 1000.

a 6099 _____ **b** 24 270 _____ **c** 93 804 _____

4 Round up or down to the nearest 10 000.

a 19 878 _____ **b** 41 997 _____ **c** 83 025 _____

5 Round up or down to the nearest 100 000.

a 498 531 _____ **b** 628 197 _____ **c** 240 799 _____

6 Write the numerals for:

a 1 hundred thousand, 4 ten thousands, 44 hundreds and 2 tens.

_____

b 120 hundreds and 81 ones. _____

c 61 thousands, 45 tens and 8 ones. _____

d 402 thousands, 32 tens and 5 ones. _____

e 49 thousands and 6 ones. _____

7 Rewrite the numbers from question 6 from smallest to largest.

_____

The last digit of a number tells us if it is odd or even.

23 657 is **odd**

because 7 is odd.

47 924 is **even**

because 4 is even.

Guided practice

1 Circle the last digit in each number, then write if it is odd or even.

a	573	_____	**b**	914	_____
c	1390	_____	**d**	8056	_____
e	23 474	_____	**f**	42 689	_____
g	95 005	_____	**h**	75 000	_____
i	10 101	_____	**j**	42 867	_____
k	57 838	_____	**l**	75 383	_____

2 If you added 1 to each number in question 1, would each one be odd or even?

a	_____	**b**	_____	**c**	_____
d	_____	**e**	_____	**f**	_____
g	_____	**h**	_____	**i**	_____
j	_____	**k**	_____	**l**	_____

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Independent practice

1 7 2 6 3 5

Use these digits to make:

a the largest odd number possible. _____

b the smallest odd number possible. _____

c the largest even number possible. _____

d the smallest even number possible. _____

2 9 0 8 0 1

Use these digits to make:

a the largest even number possible. _____

b the largest odd number possible. _____

c the smallest even number possible. _____

d the smallest odd number possible. _____

3 4 5 0 6 7

Use these digits to make:

a the largest odd number with 7 in the tens place.

_____

b the smallest even number with 0 in the thousands place.

_____

c the largest even number with 5 in the ten thousands place.

_____

d the smallest odd number with 4 in the hundreds place.

_____

4 If you add an even number to an even number, the answer is always even. Fill in the other addition and subtraction rules.

Example	Operation	Answer
4 + 4 = 8	even + even	even
4 + 5 = 9	even + odd	
5 + 4 = 9	odd + even	
5 + 5 = 10	odd + odd	
8 – 2 = 6	even – even	
8 – 3 = 5	even – odd	
9 – 4 = 5	odd – even	
9 – 3 = 6	odd – odd	

5 If you multiply an even number by an even number, the answer is always even. Fill in the other multiplication rules.

Example	Operation	Answer
2 × 2 = 4	even × even	even
2 × 3 = 6	even × _____	
5 × 2 = 10	_____ × _____	
5 × 3 = 15	_____ × _____	

6 Write whether the answer will be odd or even.

a 23 + 72 _____

b 456 – 97 _____

c 768 + 310 _____

d 803 – 549 _____

e 1765 + 9261 _____

f 8639 – 6223 _____

g 48 × 72 _____

h 83 × 46 _____

You can use these rules to help check if your calculations are correct.

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Extended practice

Can you think of any examples that don't fit these rules?

1 Solve the equations, then decide if the statements are true or false.

a ☐ ÷ 2 = 14 ☐ ÷ 2 = 17 ☐ ÷ 2 = 50

Only even numbers can be divided exactly by 2. True | False

b ☐ ÷ 3 = 5 ☐ ÷ 3 = 10 ☐ ÷ 3 = 100

Only odd numbers can be divided exactly by 3. True | False

c ☐ ÷ 4 = 10 ☐ ÷ 4 = 4 ☐ ÷ 4 = 9

Only even numbers can be divided exactly by 4. True | False

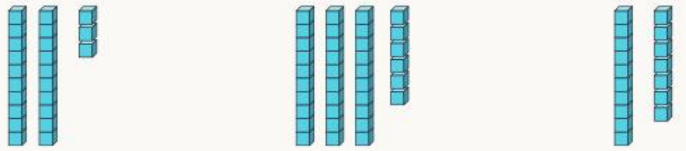
2 Use your knowledge of odd and even numbers to sort these larger numbers.

Odd	Even

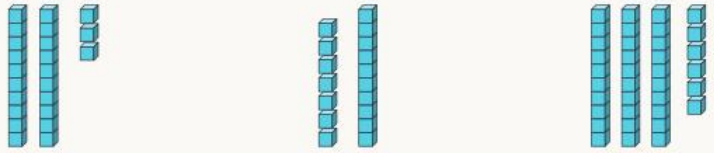
34 176 62 849
123 456 987 654
520 399 471 002
1 098 765 4 342 998
8 888 881 7 676 767

Rearranging numbers can make them easier to add mentally.

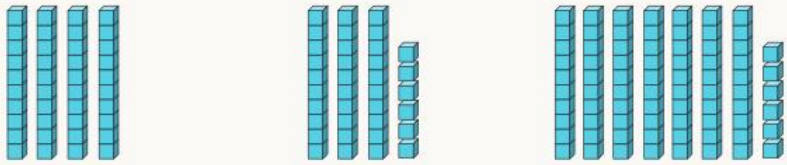
23 + 36 + 17

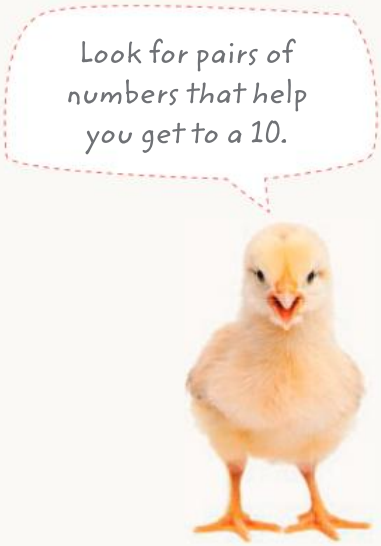


= 23 + 17 + 36



= 40 + 36 = 76





Guided practice

1 Rearrange the numbers to solve these sums.

a 2 + 35 + 18 = _____ + _____ + _____ = _____ + _____ = _____

b 13 + 46 + 7 = _____ + _____ + _____ = _____ + _____ = _____

c 38 + 51 + 32 = _____ + _____ + _____ = _____ + _____ = _____

d 42 + 53 + 8 = _____ + _____ + _____ = _____ + _____ = _____

e 16 + 92 + 4 = _____ + _____ + _____ = _____ + _____ = _____

f 45 + 22 + 125 = _____ + _____ + _____ = _____ + _____ = _____

g 17 + 42 + 13 + 28 = _____ + _____ + _____ + _____

= _____ + _____ = _____

h 19 + 44 + 16 + 21 = _____ + _____ + _____ + _____

= _____ + _____ = _____

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Independent practice

1 Rearrange the numbers in your head to solve these sums.

a 29 + 23 + 1 = _____

b 21 + 34 + 6 = _____

c 62 + 17 + 23 = _____

d 25 + 17 + 75 = _____

e 86 + 243 + 14 = _____

f 27 + 119 + 13 = _____

g 21 + 28 + 9 + 32 = _____

h 35 + 18 + 22 + 35 = _____

2 Use the jump strategy on the empty number line to solve.

a 86 + 47 = _____

b 251 + 26 = _____

c 408 + 335 = _____

d 319 + 464 = _____

e 659 + 402 = _____

3 Split both numbers to solve.

a 572 + 215

= 500 + 200 + 70 + 10 + 2 + 5

= _____ + _____ + _____ = _____

b 163 + 576

= _____ + _____ + _____ + _____ + _____ + _____

= _____ + _____ + _____ = _____

c 815 + 462

= _____ + _____ + _____ + _____ + _____ + _____

= _____ + _____ + _____ = _____

d 1625 + 3134

= _____ + _____ + _____ + _____ + _____ + _____ + _____ + _____

= _____ + _____ + _____ + _____ = _____

e 4328 + 2454

= _____ + _____ + _____ + _____ + _____ + _____ + _____ + _____

= _____ + _____ + _____ + _____ = _____

4 Try solving these sums in your head.

a 172 + 23 = _____

b 445 + 341 = _____

c 532 + 229 = _____

d 178 + 615 = _____

e 340 + 555 = _____

f 147 + 281 = _____

g 758 + 205 = _____

h 873 + 224 = _____

Which of these addition strategies could you also use for subtraction?