

**KS2
SATS
MATHS**

QUESTION WORKBOOK

MATHEMATICS

**YEAR 6
AGE 10–11**

HIGHER STANDARD

Achieve



 **hachette**
LEARNING

Contents

Introduction	4	ALGEBRA	
NUMBER AND PLACE VALUE		Algebra	31
Place value	6	Using formulae	32
Roman numerals	7	Solving equations	33
NUMBER – ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION		Linear number sequences	34
Addition and subtraction	8	MEASUREMENT	
Squares and cubes	9	Measures	35
Common multiples	10	Converting metric units	36
Common factors	11	Metric units and imperial measures	37
Prime numbers and prime factors	12	Perimeter and area	38
Multiplying and dividing by 10, 100 and 1,000	13	Area of parallelograms and triangles	40
Long multiplication	14	Volume	42
Long division	15	GEOMETRY – PROPERTIES OF SHAPES	
Correspondence	16	Angles and degrees	44
Order of operations	17	Circles	45
NUMBER – FRACTIONS, DECIMALS AND PERCENTAGES		GEOMETRY – POSITION AND DIRECTION	
Ordering fractions	18	Coordinates	46
Adding and subtracting fractions	19	Translations	48
Multiplying fractions	20	Reflections	50
Dividing fractions	21	STATISTICS	
Changing fractions to decimals	22	Tables	52
Rounding decimals	23	Timetables	53
Adding and subtracting decimals	24	Pictograms	54
Multiplying decimals	25	Bar charts	55
Percentages	26	Pie charts	56
RATIO AND PROPORTION		Line graphs	57
Ratio	27	Mean	58
Scaling	28	Answers	59
Scale factor	29		
Unequal sharing	30		

Place value

To achieve the higher standard, you need to:

- ★ know the **place value** of numbers up to 10,000,000 with up to three decimal places.

- 1 Write the value of the digit **6** in these numbers.

4,264,000

505.362

0.576

(1 mark)

- 2 Circle the **two** numbers that sum to 8,500,000

2,132,000

700,000

1,500,000

6,368,000

2,232,000

(1 mark)

- 3 Tick (✓) the statement that is **not** true.

Tick **one**.

The digit **8** in 483,723 has the value **80,000**

The digit **1** in 2,107,225 has the value **ten thousand**.

The digit **9** in 789,888 has the value **9,000**

The digit **4** in 2.354 has the value **four thousandths**.

☐
☐
☐
☐

(1 mark)

- 4 3 0 4 1 5

Use four of these cards to make a four-digit **multiple of 10** that is **less than 3,000**

Find **two** different ways to do this.

 and

(1 mark)

- 5 Write the **third odd number** that can be placed on the shaded part of this number line.

(1 mark)



Top tip

- Work out the scale on the number line first and label any points you know.

/ 5

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Ratio

To achieve the higher standard, you need to:

- ★ solve **ratio** problems where missing values can be found by using multiplication and division facts.

- 1 In a fruit salad, 12 strawberries are used for every 5 peaches.
Flora uses 85 of these fruits altogether to make a large fruit salad.
How many strawberries does she use?

1
(1 mark)

- 2 Jo draws a square with a base of 4.5 cm.
She then scales the base by a whole number to draw a larger square.

2
(1 mark)

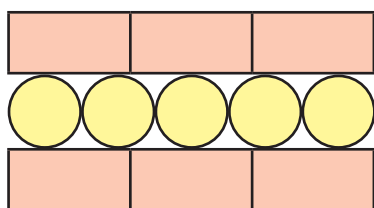
Circle the base lengths that she **cannot** make.

27 cm 45 cm 54 cm 84 cm 90 cm

- 3 The ratio of fish to frogs in a small pond is 5:2
There are 14 frogs.
How many fish and frogs are there in total?

3
(1 mark)

- 4 The picture shows one part of a repeating pattern of rectangular and circular tiles.



4
(2 marks)

Complete the table using the same ratio as shown in the picture.

Rectangular tiles 	18		66	120	
Circular tiles 		45			150



Top tip

- Ratio describes how something is divided and tells you the relative sizes of the shares.

/ 5

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Volume

To achieve the higher standard, you need to:

- ★ calculate, estimate and compare **volumes** of **cubes** and **cuboids** using standard units.

- 1 Milly has some 1 cm^3 cubes.

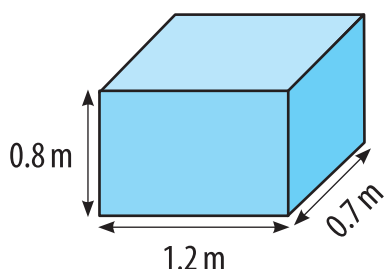
She uses them to make a cuboid 7 cm long, 5 cm wide and 2 cm high.

How many cubes does she use?

1

(1 mark)

- 2 Calculate the volume of this cuboid.


 m^3

2

(1 mark)

- 3 The volume of a cube is 216 cm^3 .

What is the length of each edge? cm

3

(1 mark)

- 4 Jenna uses the formula $\text{Volume} = \text{length} \times \text{width} \times \text{height}$ to calculate the volumes of different cuboids.

Draw lines to match the dimensions of the cuboids with their volume. Fill in the missing boxes.

$8\text{ cm} \times 6\text{ cm} \times 2.5\text{ cm}$

135 cm^3

$5\text{ cm} \times \text{ } \times 2.5\text{ cm}$

105 cm^3

$4.5\text{ cm} \times 3\text{ cm} \times 10\text{ cm}$

112.5 cm^3

$7\text{ cm} \times 6\text{ cm} \times 2.5\text{ cm}$

cm^3

4

(2 marks)

/ 5

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