

# Ratio and Proportion

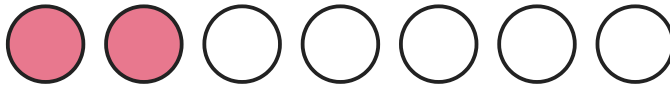
ANSWERS

Calculator | 30 minutes | Total marks: 25

Name .....

Class .....

- 1 Here are some shaded counters and some white counters.



Write down the ratio of shaded counters to white counters.

Answer 2 : 5 (1) [1 mark]

- 2 Simplify each ratio.

(a) 6 : 10

Answer 3 : 5 (1) [1 mark]

(b) 12 : 4

Answer 3 : 1 (1) [1 mark]

(c) 14 : 21

Answer 2 : 3 (1) [1 mark]

3

Sam and Zara share £35 in the ratio 2 : 5

(a) How many parts are there altogether?

Answer 7 (1)

[1 mark]

(b) Work out the value of one part.

$$35 \div 7$$

Answer £ 5 (1)

[1 mark]

(c) Work out how much each person gets.

$$2 \times 5, 5 \times 5$$

Answer Sam £10, Zara £25 (1)

[1 mark]

4

Share 40 sweets in the ratio 3 : 5

$$40 \div 8 = 5 (1)$$

Answer 15 and 25 (1)

[2 marks]

5

- (a) The ratio of red pens to blue pens in a box is 1 : 4

What fraction of the pens are red?

Answer  $\frac{1}{5}$  (1)

[1 mark]

- (b)  $\frac{2}{3}$  of the dogs at a kennel are big. The rest are small.

Write down the ratio of big dogs to small dogs.

Answer  $2 : 1$  (1)

[1 mark]

6

- (a) Squash and water are mixed in the ratio 1 : 6

Mia uses 2 cups of squash. How many cups of water does she use?

Answer  $12$  (1)

[1 mark]

- (b) On a school trip, teachers : students = 1 : 8

There are 40 students. How many teachers are there?

Answer  $5$  (1)

[1 mark]

- (c) The ratio of boys to girls in a club is 3 : 4

There are 12 boys. Work out the number of girls.

$$12 \div 3 = 4 \text{ (1)}$$

Answer  $16$  (1)

[2 marks]

7

- (a) A bus ticket costs £2.40  
Work out the cost of 3 bus tickets.

Answer £ 7.20 (1)

[1 mark]

- (b) 5 muffins cost £1.50  
Work out the cost of 1 muffin.

Answer £ 0.30 (1)

[1 mark]

- (c) Work out the cost of 8 muffins.

$$8 \times 0.30$$

Answer £ 2.40 (1)

[1 mark]

8

Here are the ingredients for a curry for 2 people.

Complete the table for 6 people.

| Ingredient   | 2 people | 6 people   |
|--------------|----------|------------|
| Rice         | 150 g    | 450 g (1)  |
| Onions       | 2        | 6 (1)      |
| Coconut milk | 100 ml   | 300 ml (1) |

[3 marks]

9 For every 1 cup of rice, Ella uses 2 cups of water.

(a) Complete the table.

|               |   |       |       |    |
|---------------|---|-------|-------|----|
| Cups of rice  | 1 | 2     | 3     | 5  |
| Cups of water | 2 | 4 (1) | 6 (1) | 10 |

[2 marks]

(b) Complete the rule: cups of water = \_\_\_\_ × cups of rice

Answer 2 (1)

[1 mark]

10 Write the ratio 4 : 12 in the form 1 :  $n$

Answer 1 : 3 (1)

[1 mark]

| Question | Topic                                          | RAG |
|----------|------------------------------------------------|-----|
| 1        | I can write a ratio                            |     |
| 2        | I can simplify a ratio                         |     |
| 3        | I can share an amount in a ratio, step by step |     |
| 4        | I can share an amount in a ratio               |     |
| 5        | I can link ratios and fractions                |     |
| 6        | I can find a missing amount from a ratio       |     |
| 7        | I can use the cost of one                      |     |
| 8        | I can scale a recipe                           |     |
| 9        | I can link ratios and tables of values         |     |
| 10       | I can write a ratio in the form 1 : $n$        |     |