



3.4F Writing and Simplifying Ratio: Foundation Tier Practice

EDEXCEL Edexcel 1MA1 · Calculator allowed · about 50 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** Write the ratio of red pens to green pens. There are 6 red pens and 10 green pens.

(Total for Question 1 is 1 mark)

- 2** Simplify the ratio 8:12.

(Total for Question 2 is 1 mark)

- 3** Share £63 in the ratio 1:2. Work out how much the smaller share is.

(Total for Question 3 is 2 marks)

- 4** There are 18 apples to be shared in the ratio 2:1. Work out how many apples the larger share receives.

(Total for Question 4 is 2 marks)

- 5** Write the ratio of blue tiles to yellow tiles in simplest form. There are 9 blue tiles and 6 yellow tiles.

(Total for Question 5 is 1 mark)

- 6** A cake recipe uses flour : sugar : butter = 4 : 3 : 1. The recipe makes 16 cups of mixture in total. Work out how many cups of sugar are needed.

(Total for Question 6 is 3 marks)

- 7** Simplify the ratio 45:60.

(Total for Question 7 is 1 mark)

- 8** Given that $a : b = 5 : 2$ and $a = 25$, work out the value of b .

(Total for Question 8 is 2 marks)

- 9** Priya and Noah share 35 stickers in the ratio 3:4. How many stickers does Priya receive?

(Total for Question 9 is 2 marks)

10 The numbers of cats, dogs and rabbits at a pet fair are in the ratio 2 : 3 : 5. There are 40 animals in total.

- (a) Work out the number of dogs and the number of rabbits.
- (b) Work out the number of cats.
- (c) Work out the ratio dogs : (cats + rabbits) in its simplest form.

(a) Work out the number of dogs and the number of rabbits. **(3)**

(b) Work out the number of cats. **(1)**

(c) Work out the ratio dogs : (cats + rabbits) in its simplest form. **(2)**

(Total for Question 10 is 6 marks)

11 Share £48 in the ratio 5:3.

- (a) Find the larger share.
- (b) Find the difference between the two shares.

(a) Find the larger share. **(2)**

(b) Find the difference between the two shares. **(2)**

(Total for Question 11 is 4 marks)

- 12** Red paint and blue paint are mixed in the ratio 3:5. A painter needs 32 litres of the mix. Work out how many litres of red paint and how many litres of blue paint are needed.

(Total for Question 12 is 4 marks)

Mark scheme · 3.4F Writing and Simplifying Ratio: Foundation Tier Practice

Question 1

- **B1** 3:5 cao
- **Answer:** 3:5

Question 2

- **B1** 2:3 cao
- **Answer:** 2:3

Question 3

- **M1** divide 63 by 3 to find one part ($63/3 = 21$) or equivalent method
- **A1** £21 cao
- **Answer:** £21

Question 4

- **M1** find one part: $18/3 = 6$ or equivalent
- **A1** 12 apples cao
- **Answer:** 12

Question 5

- **B1** 3:2 cao
- **Answer:** 3:2

Question 6

- **M1** find total parts $4+3+1 = 8$ and divide 16 by 8 to find one part = 2 (or equivalent)
- **A1** 3 parts $\times 2 = 6$ cao
- **B1** state units: 6 cups (accept 6 with units implied) oe
- **Answer:** 6 cups

Question 7

- **B1** 3:4 cao
- **Answer:** 3:4

Question 8

- **M1** find one part: $25/5 = 5$ or equivalent method
- **A1** 10 cao
- **Answer:** 10

Question 9

- **M1** find one part: $35/7 = 5$ or equivalent
- **A1** 15 cao
- **Answer:** 15

Question 10

- (a) **M1** find total parts $2+3+5 = 10$ and one part $= 40/10 = 4$ (or equivalent)
- (a) **A1** dogs $= 3 \times 4 = 12$ cao
- (a) **A1** rabbits $= 5 \times 4 = 20$ cao
- **(a) Answer: dogs 12, rabbits 20**
- (b) **B1** cats $= 2 \times 4 = 8$ cao
- **(b) Answer: 8**
- (c) **M1** form ratio $12 : (8 + 20) = 12 : 28$ or equivalent
- (c) **A1** 3:7 cao
- **(c) Answer: 3:7**

Question 11

- (a) **M1** find one part: $48/8 = 6$ or equivalent
- (a) **A1** £30 cao
- **(a) Answer: £30**
- (b) **M1** find smaller share $3 \times 6 = 18$ or equivalent
- (b) **A1** £12 cao
- **(b) Answer: £12**

Question 12

- **M1** find one part: $32/(3+5) = 32/8 = 4$ or equivalent
- **A1** red $= 3 \times 4 = 12$ litres cao
- **M1** use same one part for blue
- **A1** blue $= 5 \times 4 = 20$ litres cao
- **Answer: red 12 litres, blue 20 litres**