Writing a Ratio as a Fraction or Linear Function

Grade 5 topic · Foundation and Higher · Edexcel and AQA

How to use this pack
20 questions that get harder as you go. Foundation students: aim for Questions 1–15 (43 marks) and have a go at the rest. Higher students: complete all 20. Show your working on the lines and write your final answer on the answer line, then mark yourself with the answers at the back. Diagrams are not drawn accurately. Total: 66 marks.

Warm-up

1 The ratio of boys to girls is 1 : 4. What fraction of the children are boys? **[2 marks]**

Answer _____

2 x : y = 3 : 5. Write x as a fraction of y. **[2 marks]**

Answer _____

3 x : y = 3 : 4. Write y as a fraction of x. **[2 marks]**

Answer _____

4 In a bag the ratio of red to blue counters is 2 : 5. What fraction of the counters are blue? **[2 marks]**

Answer _____

5 The ratio of cats to dogs is 2 : 3. What fraction of the animals are dogs? **[2 marks]**

Answer _____

Core

6 x : y = 2 : 3. Write y in terms of x. **[3 marks]**

Answer _____

7 x : y = 4 : 7. Find y when x = 12. **[3 marks]**

Answer _____

8 x : y = 4 : 7. Find x when y = 63. **[3 marks]**

Answer _____

9 a : b = 3 : 4. Write a in terms of b. **[3 marks]**

Answer _____

10 p : q = 4 : 1. Write q in terms of p. **[3 marks]**

Answer _____

Stretch

11 x : y = 2 : 5 and x + y = 63. Work out x and y. **[4 marks]**

Answer _____

12 x : y = 3 : 5. Show that 5x = 3y. **[3 marks]**

Answer _____

13 x : y = 5 : 6 and y − x = 6. Work out x. **[4 marks]**

Answer _____

14 The ratio of the width to the length of a rectangle is 2 : 5. The length is 10 cm. Work out the perimeter. **[4 marks]**

Answer _____

15 x : y = 1 : 4. Write x/y as a decimal to 3 s.f. **[3 marks]**

Answer _____

Challenge

16 x : y = 2 : 5 and y : z = 3 : 4. Write x : z in the form 1 : n. **[5 marks]**

Answer _____

17 A : B = 5 : 6 and B : C = 3 : 4. Find A : B : C. **[5 marks]**

Answer _____

18 The ratio x : y = 3 : 4. Write the ratio (x + y) : (y − x). **[5 marks]**

Answer _____

19 y is 5/3 times x. Write the ratio x : y in simplest form. **[4 marks]**

Answer _____

20 If $x : y = 5 : 6$, find $(x + 5) : (y + 6)$. **[4 marks]**

Answer _____