



# GCSE Maths

## Numbers

### Ratio and Proportion

Name:

Date:

## Materials

You can use a calculator for these questions



## Tips

Show how you worked out the answer if you can.

### Simple Questions

1. Share £60 in the ratio 2:1.

Answer \_\_\_\_\_ [1 mark]

2. Simplify the ratio 12:16.

Answer \_\_\_\_\_ [1 mark]

3. A drink is made by mixing orange juice and water in the ratio 3:5.  
How much water is needed if there is 9 litres of orange juice?

Answer \_\_\_\_\_ [1 mark]

4. A recipe requires flour and sugar in the ratio 4:3.  
If 200g of flour is used, how much sugar is needed?

Answer \_\_\_\_\_ [1 mark]

5. A school has 150 boys and 100 girls.  
Write the ratio of boys to girls in its simplest form.

Answer \_\_\_\_\_ [1 mark]



### Medium Questions

6. Divide 72 in the ratio 5:4.

Answer \_\_\_\_\_ [2 mark]

7. A map scale is 1:50,000. If two towns are 3 cm apart on the map, what is the real-world distance in km?

Answer \_\_\_\_\_ [2 mark]

8. The ratio of red to blue counters in a bag is 7:3.  
There are 35 red counters. How many blue counters are there?

Answer \_\_\_\_\_ [2 mark]

9. The cost of a holiday is shared between three friends in the ratio 3:2:1. If the total cost is £1,200, how much does the person with the smallest share pay?

Answer \_\_\_\_\_ [2 mark]

10. A recipe uses butter and flour in the ratio 2:5. If you need 400g of flour, how much butter do you need?

Answer \_\_\_\_\_ [2 mark]



### Difficult Questions

11. A solution is made by mixing acid and water in the ratio 2:7.  
If 126 ml of water is used, how much acid is needed?

Answer \_\_\_\_\_ [3 mark]

12. A metal alloy contains copper and zinc in the ratio 5:3.  
If a bar of the alloy weighs 640g, how much zinc does it contain?

Answer \_\_\_\_\_ [3 mark]

13. A school trip costs £450 in total and is shared among students in the ratio 5:4. How much does each group pay?

Answer \_\_\_\_\_ [3 mark]

14. Two people invest in a business in the ratio 4:7. If the total profit is £3,300, how much does the person with the larger share receive?

Answer \_\_\_\_\_ [3 mark]

15. A drink is made by mixing cordial and water in the ratio 1:8.  
How much cordial is needed to make 900 ml of the drink?

Answer \_\_\_\_\_ [3 mark]

