Ratio

KS3 Maths · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Share £40 in the ratio 3:5

Step 1 · Add the parts

3 + 5 = 8 total parts

Step 2 · Find the value of one part

£40 ÷ 8 = £5 per part

Step 3 · Multiply each share

3 × £5 = £15 and 5 × £5 = £25

Answer: £15 : £25

Check: £15 + £25 = £40 ✓

2. Now try one with the steps

Simplify 45:30:15

Step 1 · Find the HCF of all three numbers

Step 2 · Divide every term by the HCF

Answer:

3. Practice

Show your working. The marks tell you how much is expected.

1. Simplify the ratio 18:24. [2]

2. Share £60 in the ratio 2:3. [2]

3. A recipe uses flour and sugar in the ratio 5:2. If you use 250g of flour, how much sugar is needed? [2]

4. Share £90 in the ratio 1:2:3. [3]

5. The ratio of cats to dogs in a shelter is 3:5. There are 45 dogs. How many cats are there? [3]

6. Two numbers are in the ratio 4:7. Their sum is 99. Find the two numbers. [3]

7. Simplify the ratio 15:35. [1]

8. Share £56 in the ratio 3:4. [2]

9. The ratio of boys to girls in a class is 4:5. What fraction of the class are girls? [1]

10. Write 50 cm : 2 m ratio in its simplest form. [2]

11. Green paint is mixed from blue and yellow in the ratio 2:3. Zara uses 12 litres of yellow. How many litres of blue does she need? [2]

12. Share 72 sweets in the ratio 1:3:5. [2]

13. The ages of a girl and her aunt are in the ratio 2:5. The aunt is 18 years older. How old is the aunt? [3]

14. Write 1.5 : 4 ratio of whole numbers in its simplest form. [2]

15. Write 5:8 in the form 1:n. [2]

16. A bag has red and blue counters in the ratio 3:2. When 10 more blue counters are added, the ratio becomes 1:1. How many red counters are there? [3]

4. Before you hand it in

Sharing £40 in ratio 3:5 as £40÷3=£13.3 and £40÷5=£8

Add the parts FIRST (3+5=8), divide the total by the SUM (£40÷8=£5), then multiply by each part (3×£5=£15, 5×£5=£25).

Simplifying 12:18 to 2:3 by dividing each by a different number

You must divide BOTH numbers by the SAME factor — the highest common factor. 12÷6=2 and 18÷6=3, giving 2:3.

A class has 12 boys and 15 girls. Writing the ratio of girls to boys as 12:15

The order of the words gives the order of the numbers. Girls to boys is 15:12, which simplifies to 5:4.