

**YEAR 5**

Ratio and Proportion

Written answers, as CSSE sets them. Almost every ratio question comes down to one step: find what ONE part is worth. Draw a bar model if the words get in the way, and give units with every answer.

Name: _____

Date: _____

Score: _____

A. Ratio

Simplify by dividing both sides by the same number. Scale up by multiplying both.

- 1 A class has 12 boys and 18 girls. Write the ratio of boys to girls in its simplest form.
- 2 Write 15 : 25 in its simplest form.
- 3 A recipe uses 3 eggs for every 200 g of flour. How many eggs are needed for 600 g of flour?
- 4 For every 4 red beads on a necklace there are 7 blue beads. There are 28 red beads. How many blue beads are there?
- 5 The ratio of cats to dogs at a rescue centre is 5 : 2. There are 35 cats. How many dogs are there?
- 6 The bar model shows the ratio of Ali's sweets to Ben's. Ali has 12 sweets. How many does Ben have?

Ali



12

Ben

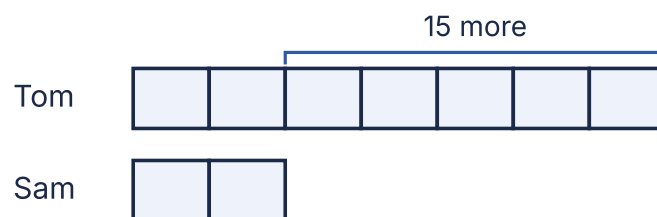


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B. Sharing in a ratio

Add the parts, find one part, then multiply. Check the shares add back to the total.

- 7 Share £160 in the ratio 3 : 5. What is the larger share?
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- 8 Maya and Jo share 45 stickers in the ratio 4 : 5. How many does Maya get?
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- 9 £72 is shared in the ratio 1 : 2 : 3. What is the largest share?
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- 10 Blue and yellow paint are mixed in the ratio 2 : 5 to make green. How much yellow is in 21 litres of green?
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- 11 The ratio of boys to girls in a club is 3 : 4. There are 35 children. How many are girls?
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- 12 Tom and Sam share some marbles in the ratio 7 : 2. Tom gets 15 more than Sam. How many does Tom get?



C. Proportion

Find the cost or amount for ONE first, then scale to what the question asks.

- 13 5 pens cost £3.50. How much do 8 pens cost?
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- 14 A recipe for 4 people uses 300 g of pasta. How much pasta is needed for 6 people?
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- 15 A pack of 6 rolls costs £2.40. A pack of 10 costs £3.80. Which pack is better value? Show how you know.
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16 A map has a scale of 1 : 50 000. Two villages are 4 cm apart on the map. How far apart are they in real life, in kilometres?

17 A car uses 6 litres of fuel to travel 75 km. How far can it go on 18 litres?

18 £1 is worth 1.20 euros. How many pounds is 150 euros?
