



11+ MATHEMATICS

Ratio and Proportion Revision Sheet

Key facts · Method · Worked example · Quick check

Ratio questions ask you to share, compare or scale amounts. Drawing bars makes them much easier.

Key facts

What a ratio means	3 : 5 means for every 3 of the first, there are 5 of the second.
Simplifying	Divide every part by the highest common factor: $12 : 18 \rightarrow 2 : 3$.
Sharing	Add the parts, find one part, then multiply.
Differences	If you know the difference between two shares, divide it by the difference in parts.
Proportion	Find the value of one first (the unitary method), then scale up.

Method: sharing in a ratio

- 1 Add the parts of the ratio to get the total number of parts.
- 2 Divide the amount by the total parts to find one part.
- 3 Multiply one part by each number in the ratio.
- 4 Check the shares add up to the original amount.

Common mistakes

Watch out: Dividing by one number in the ratio instead of the total parts.

Watch out: Writing the shares in the wrong order.

Watch out: Treating a difference as one part.

Worked example

Share £120 in the ratio 3 : 5.

Step	What to do	Working
1	Total parts	$3 + 5 = 8$
2	One part	$£120 \div 8 = £15$
3	Each share	$3 \times £15 = £45$ and $5 \times £15 = £75$
4	Check	$£45 + £75 = £120$ ✓
✓	Answer	£45 and £75

£120 shared 3 : 5 → 8 parts

3 parts

£15	£15	£15
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 = £45

5 parts

£15	£15	£15	£15	£15
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 = £75

$£120 \div 8 = £15$ per part

Quick check

	Question	Your answer
1	Write 15 : 25 in its simplest form	
2	Share 48 in the ratio 1 : 3	
3	3 apples cost 75p. What do 7 apples cost?	

Answers: 1) 3 : 5 2) 12 and 36 3) £1.75

Put your ratio and proportion skills to the test.

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