

Check out

You should now be able to ...

	Questions
✓ Solve problems involving direct proportion.	6 1 - 2
✓ Use percentages to compare proportions.	6 3
✓ Calculate with ratios, including dividing quantities in a given ratio.	6 4 - 6
✓ Solve problems involving ratio.	7 7 - 8
✓ Calculate a percentage increase or decrease.	6 9 - 11

Test it

Questions

- 200g of butter costs £1.28. What is the cost of 250g of the same butter?
- A 150g sharing pack of crisps contains 1.35g of salt. How much salt is in a single 35g bag of the same crisps?
- 67 out of 98 students passed test A and 268 out of 400 students passed test B. Which test had the higher percentage of students passing?
- Write each of these ratios in its simplest form.
 - 16 : 32 : 24
 - 40 seconds : 3 minutes
- Divide 600m in the ratio 7 : 5.
 - Divide £1.17 in the ratio 2 : 8 : 3.
- Write each of these ratios in the form $1:n$.
 - 5 : 12
 - 150cm : 2.25m
- 20% of a quantity is £19. Calculate the whole amount.
- A pair of trainers is reduced from £60 to £45. What was the percentage reduction in price?
- 5lb is approximately the same as 2.27kg.
 - Calculate the single multiplier that converts pounds (lb) to kg.
 - Calculate the single multiplier that converts kg to pounds (lb).



Language

Meaning

Example

Direct proportion	Two quantities that are related so that when one is multiplied by a number, the other is multiplied by the same number.	If text messages cost 5 pence each, then the number of text messages is proportional to the cost of the text messages.
Divide in a ratio	To share out a quantity into a number of (usually) unequal parts.	£60 divided in the ratio 2 : 1 is £40 : £20.
Simplify a ratio	To write a ratio in its simplest form by dividing by common factors.	28 : 14 can be simplified to 2 : 1 by dividing both parts by the common factor 14.
1 : n	A ratio that has been simplified so that the first number is 1.	4 : 10 can be divided by 4 to give the equivalent ratio 1 : 2.5
Percentage change	The percentage increase or decrease that changes an original amount to a new amount.	A car that cost £20 000 is now worth £15 000. This is a percentage reduction of 25%.

What next?

Score	What next?
0 - 4	Your knowledge of this topic is still developing. To improve look at Formative test: 3B-15; MyMaths: 1036, 1039, 1103, 1245, 1302 and 1934
5 - 9	You are gaining a secure knowledge of this topic. To improve look at InvisiPen: 136, 153, 154, 191, 192, 193, 194 and 195
10, 11	You have mastered this topic. Well done, you are ready to progress!