



Shortcuts using decimals

The factsheet Using a calculator to find percentages 2 asks you to find 85% of £80.

85% is **0.85 as a decimal**. So we can find the answer like this:

$$0.85 \times 80 =$$

The answer is **£68**.

Writing percentages as decimals makes the calculations shorter. The quick way to turn a **percentage into a decimal** is to **divide it by 100**.

For example, to change 75% to a decimal work out $75 \div 100$:

$$75 \div 100 = 0.75$$

So **75%** is the same as **0.75**.

In the same way divide 5% by 100 to make it into a decimal:

$$5 \div 100 = 0.05$$

So **5%** = **0.05**.

It works for all percentages. Divide 120% by 100 to make it into a decimal.

$$120 \div 100 = 1.20$$

So **120%** = **1.2**.

For information about this see the factsheet Comparing sizes.

If the price of a coat that originally cost £80 is **increased** by 15%, then we need to find 115% of the original price. 115% as a decimal is 1.15. So the calculation to get the answer is:

$$1.15 \times 80 = \text{£92}$$

Below are some examples from Using a calculator to find percentages 1 and Using a calculator to find percentages 2. They've been worked through using the method from this factsheet. Use your calculator to practise the steps.

Original price	Original price, with percentage change	Percentage change to find	Sum	New price
£40	35% increase	$100\% + 35\% = 135\%$	1.35×40	£54.00
£36	12% increase	$100\% + 12\% = 112\%$	1.12×36	£40.32
£56	7% decrease	$100\% - 7\% = 93\%$	0.93×56	£52.08
£110	55% decrease	$100\% - 55\% = 45\%$	0.45×110	£49.50