Using direct proportion

Understanding proportion can help in making all kinds of calculations. It helps to work out the **value or amount of quantities** that are either bigger or smaller than the one about which you have information. Here are some examples:

Example 1: if you know the cost of 3 packets of batteries is £6, can you work out the cost of 5 packets?

To solve this problem you need to know the cost of 1 packet.

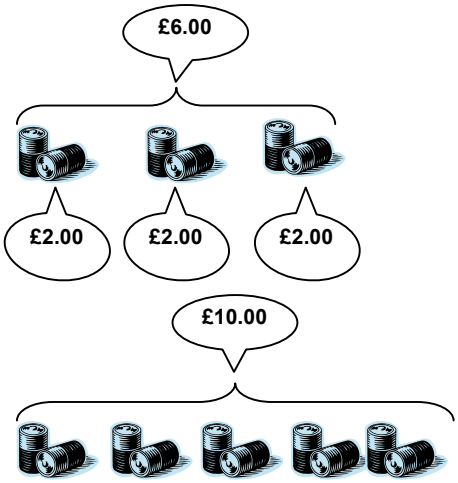
If 3 packets cost £6, then divide £6 by 3 to find the price of 1 packet.

6 ÷ 3 = 2

Now you know that the batteries cost £2 each, to work out the cost of 5 packets you multiply £2 by 5.

2 × 5 = 10

So 5 packets of batteries cost **£10**.



Example 2: you've invited friends round for pizza. You have the toppings but need to make the base. In the recipe book the quantities given are for 2 people and you need to cook for 5.

Pizza base (for 2 people):

100 g flour	60 ml water
4 g yeast	20 ml milk
pinch of salt	

The trick is to divide all the amounts by 2 to give you the quantities for 1 serving. Then multiply the amounts by the number stated in the question - 5.

For **1 serving**, divide by 2:

100 g ÷ 2 = 50 g	60 ml ÷ 2 = 30 ml
4 g ÷ 2 = 2 g	20 ml ÷ 2 = 10 ml

For **5 servings**, multiply by 5:

50 g × 5 = 250 g	30 ml × 5 = 150 ml
2 g × 5 = 10 g	10 ml × 5 = 50 ml