Proportion.

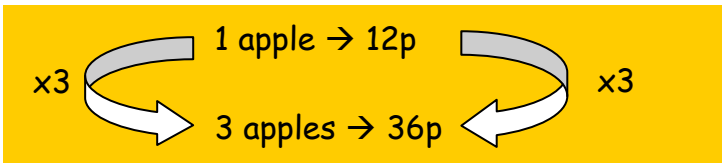
You should be able to know the difference between direct and inverse proportion and be able to work out the values from different situations when you know which type of proportion to use.

Proportion is very much a real life application of Mathematics. We have all used it in our everyday lives but you probably didn't know it as direct or inverse proportion.

Direct.

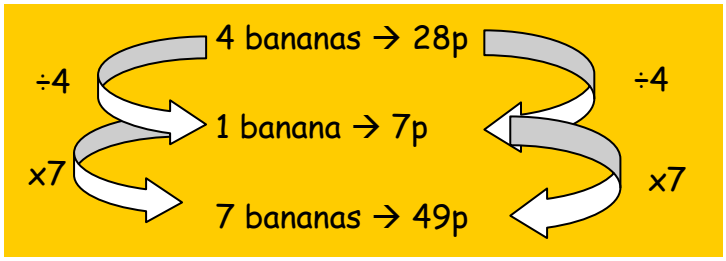
"As one quantity increases, so does the other."

Example 1: If one apple costs 12p. How much will 3 apples cost?



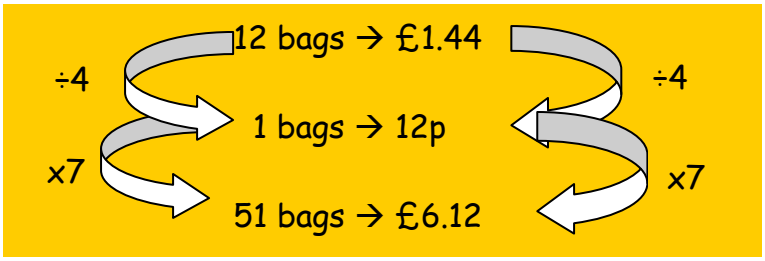
Notice how we treat proportion the same way as we treat ratio. When we multiply one side by 3, we multiply the other side by 3 as well. This makes good sense.

Example 2: 4 bananas cost 28p. How much will 7 bananas cost?



Direct proportion also allows us to work out a quantity when you don't exactly know how much one of that quantity costs. You must first work out what one banana costs and then multiply up to get the cost of 7.

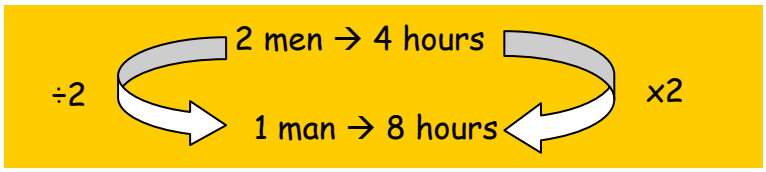
Example 3: 12 bags of crisps cost £1.44. How much will 51 bags cost?



Inverse

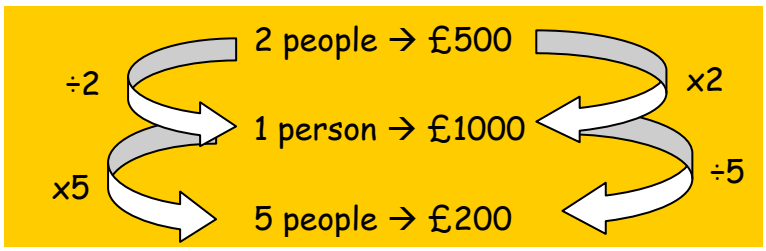
"As one quantity increases the other decreases"

Example 4: 2 men take 4 hours to mow a lawn. How long will it take 1 man?



Think about it. If you and a friend are cutting someones grass. If your friend leaves you to cut it yourself, will it take longer or shorter? So in this case, if you half the man power, you double the time. Its common sense.

Example 5: £1000 is shared amongst 2 people equally. If it is shared between 4 people how much will each person get?



Work with inverse proportion the exact same way you worked with direct proportion. Find out how much money **1** person would get, and then find out how much 5 people would get. Obviously if the money is shared amongst more people, each person will get less of the share.