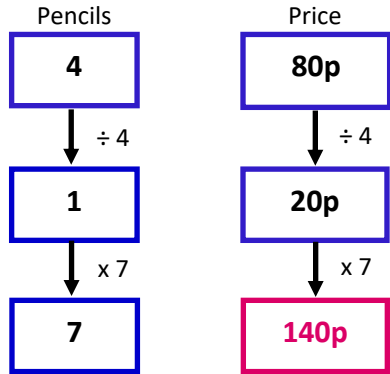


## 1. Unitary Method

Being able to work out how much one unit is worth helps us to scale up our problem. A proportion grid is a useful way to set out our working.

### 4 Pencils cost 80p, work out the cost of 7 pencils.



Work out the cost of one pencil by dividing by 4

Then find the cost of 7 pencils by multiplying by 7

So 7 pencils cost 140p (or £1.40)

## 3. Recipe problems

This is the recipe for cottage pie for 2 people:

	2 people	1 person	3 people
mince	250 g	125 g	375 g
potato	400 g	200 g	600 g
butter	30 g	15 g	45 g

How much of each ingredient would you need for 3 people?

Work out the recipe per person by  $\div 2$

Eg. Mince for 1 person =  $250\text{g} \div 2 = 125\text{g}$

Then find the recipe for 3 people by multiplying by 3

Eg. Mince for 3 people =  $125\text{g} \times 3 = 375\text{g}$



## Year 8 - Proportion

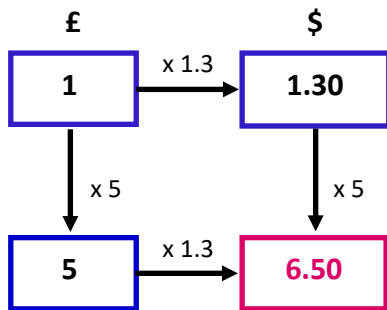
### 2. Converting currency

Proportion grids work by multiplying or dividing down the grid, but also across.

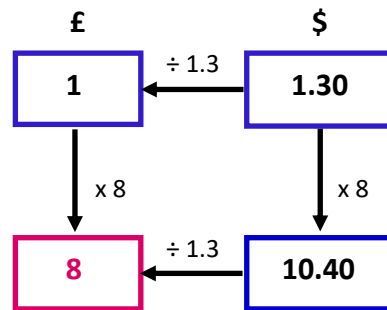
Given that  $\text{£}1 = \$1.30$

a) Work out the value of  $\text{£}5$  in  $\$$

b) Work out the value of  $\$10.40$  in  $\text{£}$



So  $\text{£}5 = \$6.50$



So  $\$10.40 = \text{£}8$

For a) it is easier to go down and  $\times 5$ ,

but for b) it is easier to go across and  $\div 1.30$

### 4. Best buys

A fruit drink comes in two sizes:

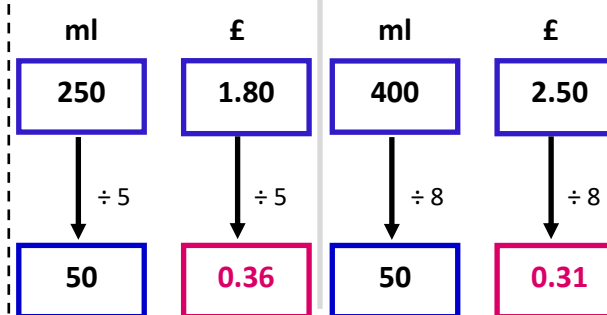
a) 250ml for  $\text{£}1.80$  b) 400ml for  $\text{£}2.50$

Which is the best value?

We can't easily compare 250ml and 400ml.

But we can if we know the price per 50ml

a)



$\text{£}0.31$  per 50ml is the cheapest per 50ml, so b) 400ml for  $\text{£}2.50$  is the best value.

b)

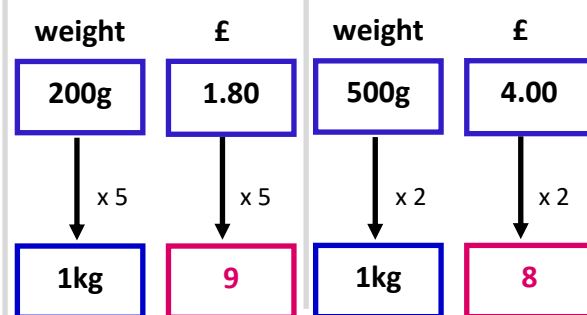
At the hardware store, nails can be purchased in two different packets:

a) 200g for  $\text{£}1.80$

b) 500g for  $\text{£}4.00$

200g and 500g are both factors of 1kg.

To compare value, calculate the price for 1kg.



So, b) represents the best value for money

Look for the cheapest price per unit in any best buy question, or use a common multiple