Proportions and Ratios

Question:

If 3kg of apples cost 99p what would 5kg cost?

Answer

Method 1:
If 3kg cost 99p
How much will 1kg cost?

1 kg will cost $\dfrac{99p}{3} = 33p$

So 5kg will cost $5 \times 33p = 165p$ *or* £1.65

Method 2: (short cut)

3kg 99p
5kg .... ?

- Use the single number next to the question mark as a multiplier
- Make a fraction out of the other two numbers
- Which way you make the fraction depends on what you expect (large or small for the ? mark)
- In this case you expect 5kg to cost more so the fraction is $\dfrac{5kg}{3kg}$
- So the answer is $\dfrac{5kg}{3kg} \times 99p = 165p$ *or* £1.65

Use both methods to answer the following questions

1. If 5kg of potatoes cost 90p, what is the cost of 3kg?
2. If 6 litres of paraffin cost 96p, what is the cost of 4 litres?
3. If the cost of 20 postcards cost 180p, what is the cost of 50?
4. If it takes me 45 minutes to walk 5km, how long will it take me to walk?
   (a) 9km   (b) 4km
5. If 12m^2 of carpet cost £60, find the cost of:
   (a) 5m^2 (b) 8m^2
6. If 6kg of bananas cost £2.40 find the cost of 2kg?
7. If 4kg of tomatoes cost £3.60, find the cost of 3kg?
8. If 20 litres of petrol cost £27.40, find the cost of:
   (a) 8 litres   (b) 12 litres   (c) 30 litres