Q1.

In Scotland, squirrels are red or grey in the ratio   red : grey = $1 : 2\frac{1}{2}$

(a)   What fraction of the squirrels in Scotland are red?

....

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Answer ....

(2)

(b)   In Scotland there are 120 000 red squirrels.

How many squirrels are there altogether in Scotland?

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Answer ....
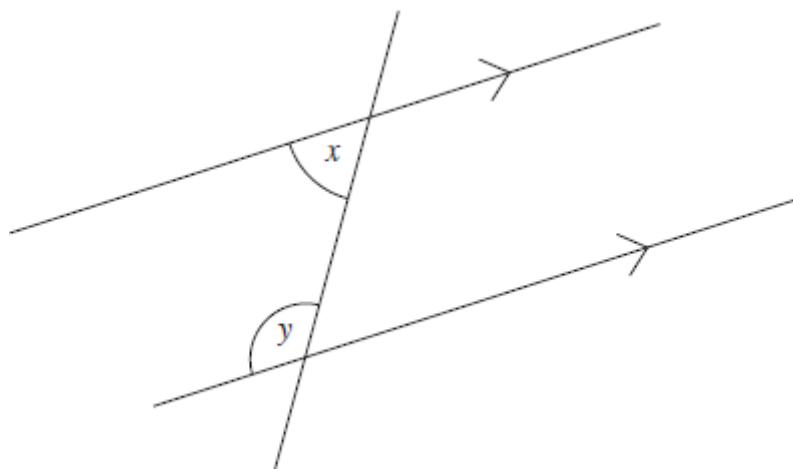
(2)

(Total 4 marks)

Q2.

Not drawn accurately

(a)   Use the diagram to write an equation connecting x and y.

Answer ....

(1)

(b)   The ratio $x : y = 2 : 3$

Use this information to write another equation connecting x and y.

....

....

Answer ....

(1)
(Total 2 marks)

Q3.
180 counters are red or blue.
The ratio of red to blue is   4 : 1

(a)   How many of the counters are red?

....

....

Answer ....

(2)

(b)   What percentage of the counters are red?

....

....

Answer .... %

(2)
(Total 4 marks)

Q4.

A smoothie recipe uses banana, kiwi and yoghurt in the ratio   4 : 1 : 3   by weight.

(a)   A smoothie is made using 280 g of banana.

How much kiwi and yoghurt are needed?

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....

....

Kiwi .... g

Yoghurt .... g

(3)

(b)   Express the weight of kiwi as a percentage of the weight of the smoothie.

....

....

....

Answer .... %

(2)

(c)   Each smoothie costs 72p to make.

(i)   The smoothies are sold at the school fayre.
The school wants to make at least 30% profit on each smoothie.

Work out the cheapest selling price to do this.

....

....

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Answer ....

(4)

(ii)   The cost of banana for one smoothie is 15p.
       The price of bananas increases by 40%.

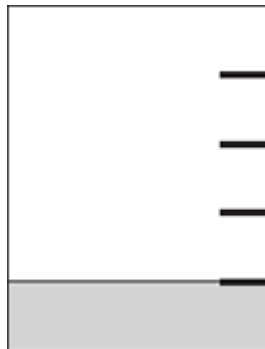   Work out the percentage increase in the cost of making a smoothie.

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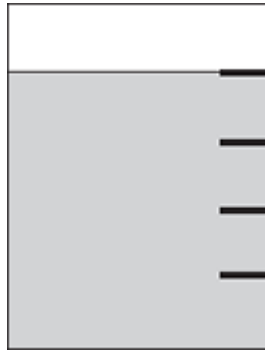Answer .... %

(4)
(Total 13 marks)

Q5. When a jug is $\frac{1}{5}$ full of water it weighs 250 grams.

When the same jug is $\frac{4}{5}$ full of water it weighs 550 grams.

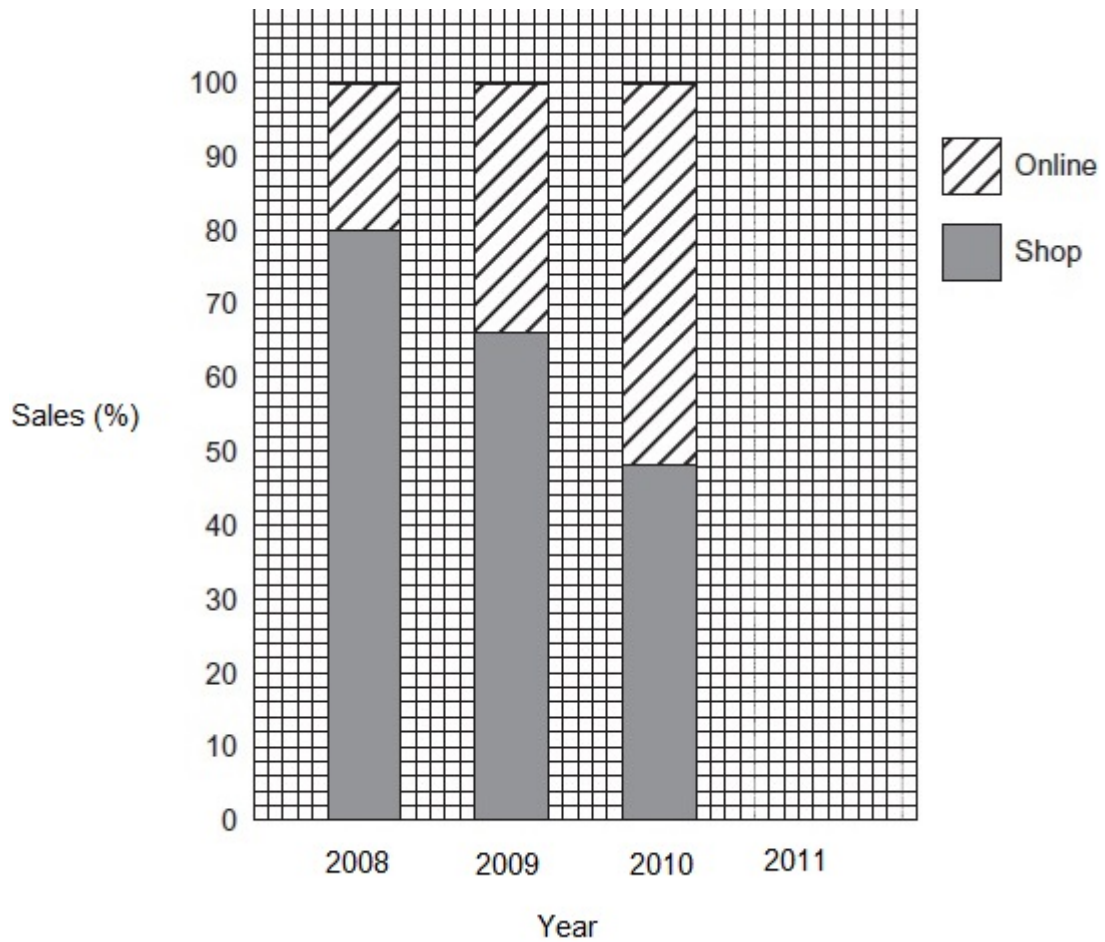How much does the jug weigh when it is empty?

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Answer .... grams

(Total 4 marks)

Q6. A company sells items online and in a shop.
This chart shows information about its sales.

(a)   The table shows the sales for 2011.

	Sales (£ thousands)
Online	152
Shop	48
Total	200

Show the information for 2011 sales on the chart.

....

....

(3)

(b)   Work out the ratio of online sales to shop sales for **2008**.
Give your answer in its simplest form.

....

Answer   .... : ....

(2)

(c)   In 2012   online sales : shop sales = 3 : 1

What **fraction** of the 2012 sales were online?

....

Answer ....

(1)
(Total 6 marks)

Q7. Here are Jon's marks in two tests.

Test A   18 out of 25

Test B   30 out of 40

Which test gives the higher percentage mark?
You **must** show your working.

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Answer ....

(Total 3 marks)

Q8. (a)   A drink is made from 1.5 litres of orange juice and 7.5 litres of lemonade.

What fraction of the drink is orange juice?
Give your answer in its simplest form.

....

....

....

Answer ....

(3)

(b)   A different drink is made from 2 litres of blackcurrant juice and 12 litres of water.

How much more blackcurrant juice should be added so that 25% of the drink is blackcurrant juice?

....

....

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....

....

Answer .... litres

(3)
(Total 6 marks)