

Q1.

There are 40% more black balls than white balls in a bag.

Work out the ratio of black balls to white balls.

Give your answer in its simplest form.

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Answer :

(Total 2 marks)

Q2.

Abby and Judy share some money.

Abby gets 25%

- (a) Write Abby's share : Judy's share as a ratio.
Give your answer in its simplest form.

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Answer :

(2)

- (b) Judy gets £19.50

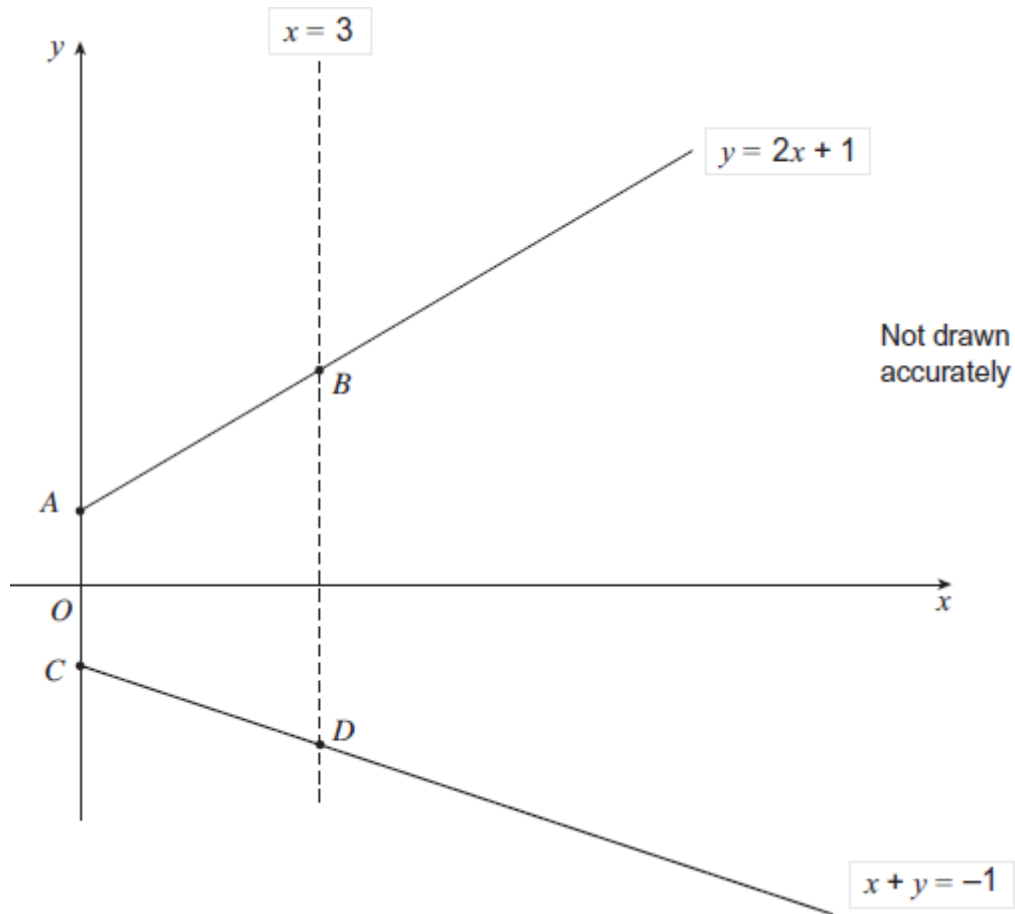
How much does Abby get?

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Answer £

(2)
(Total 4 marks)

Q3.



Work out the ratio of lengths $AC : BD$

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Answer :

(Total 4 marks)

Q4.Janet and Robin buy raffle tickets.

The prize is £ 120.

Janet buys 5 tickets.

Robin buys 1 ticket.

- (a) Who has the better chance of winning?
Give a reason for your answer.

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(1)

- (b) In total, 300 tickets were sold.

What is the probability that Janet wins?

Give your answer as a fraction in its simplest form.

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Answer

(2)

- (c) Janet wins the prize of £ 120.
She shares it with Robin in the ratio 5 : 1

Robin gets the smaller share.

How much does he get?

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Answer £

(2)

(Total 5 marks)

Q5. A triangle, square and pentagon have a **total** area of 48 cm².
The areas of the shapes are in the ratio of their number of sides.

Work out the area of the **pentagon**.

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Answer cm²

(Total 3 marks)

Q6.

To make 12 biscuits you need

- 100 g butter
- 100 g sugar
- 150 g flour
- 50 g cocoa
- 30 ml milk

(a) How much cocoa do you need to make 36 biscuits?

.....
.....

Answer g

(2)

(b) You need 100 g of butter to make 12 biscuits.

You have 250 g of butter.

You have plenty of everything else.

What is the maximum number of biscuits you can make?

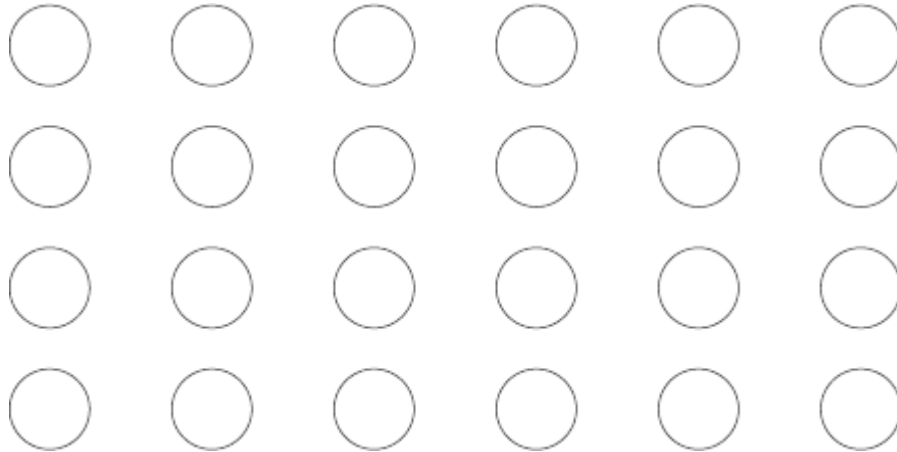
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Answer

(3)

(c) Jed makes 24 biscuits.



He sells $\frac{2}{3}$ of the biscuits.

He eats $\frac{1}{2}$ of the biscuits that are left.

How many biscuits does he eat?

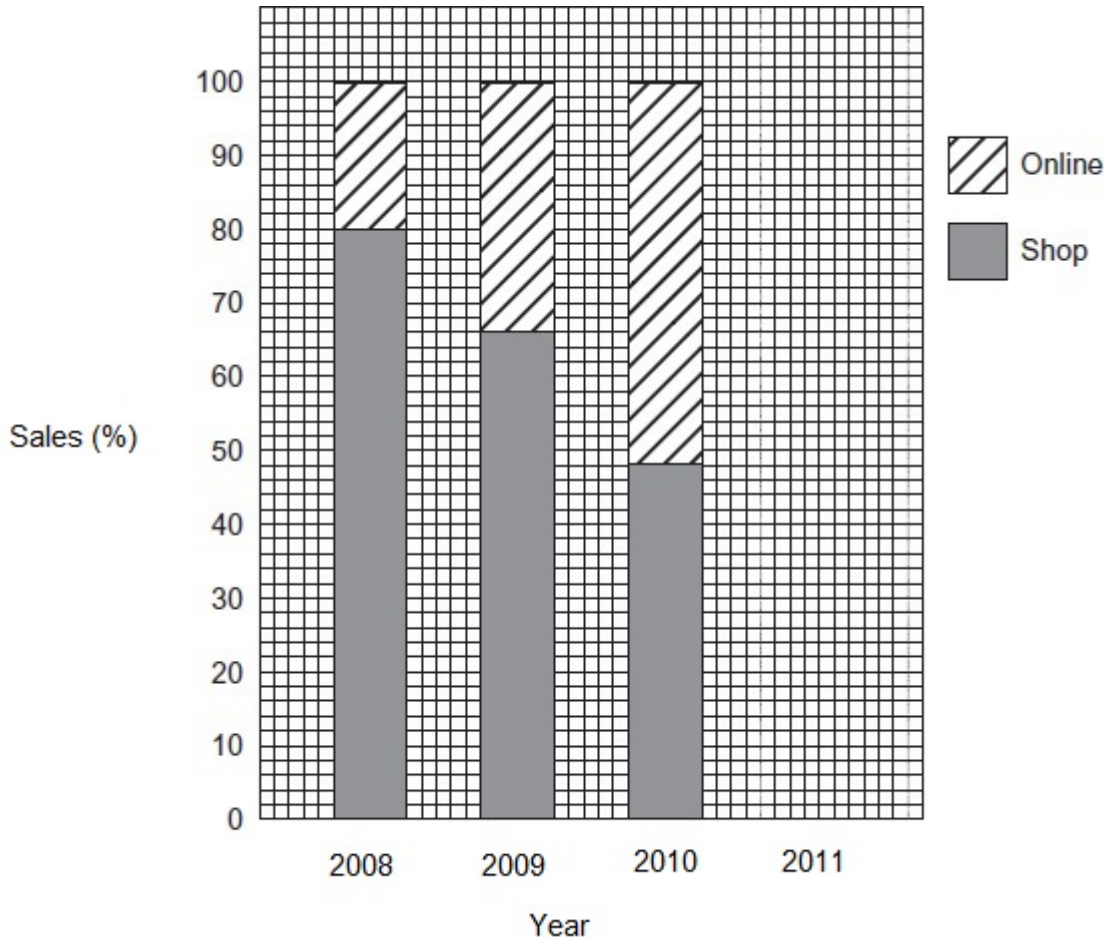
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Answer

(4)

(Total 9 marks)

Q7.A 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.

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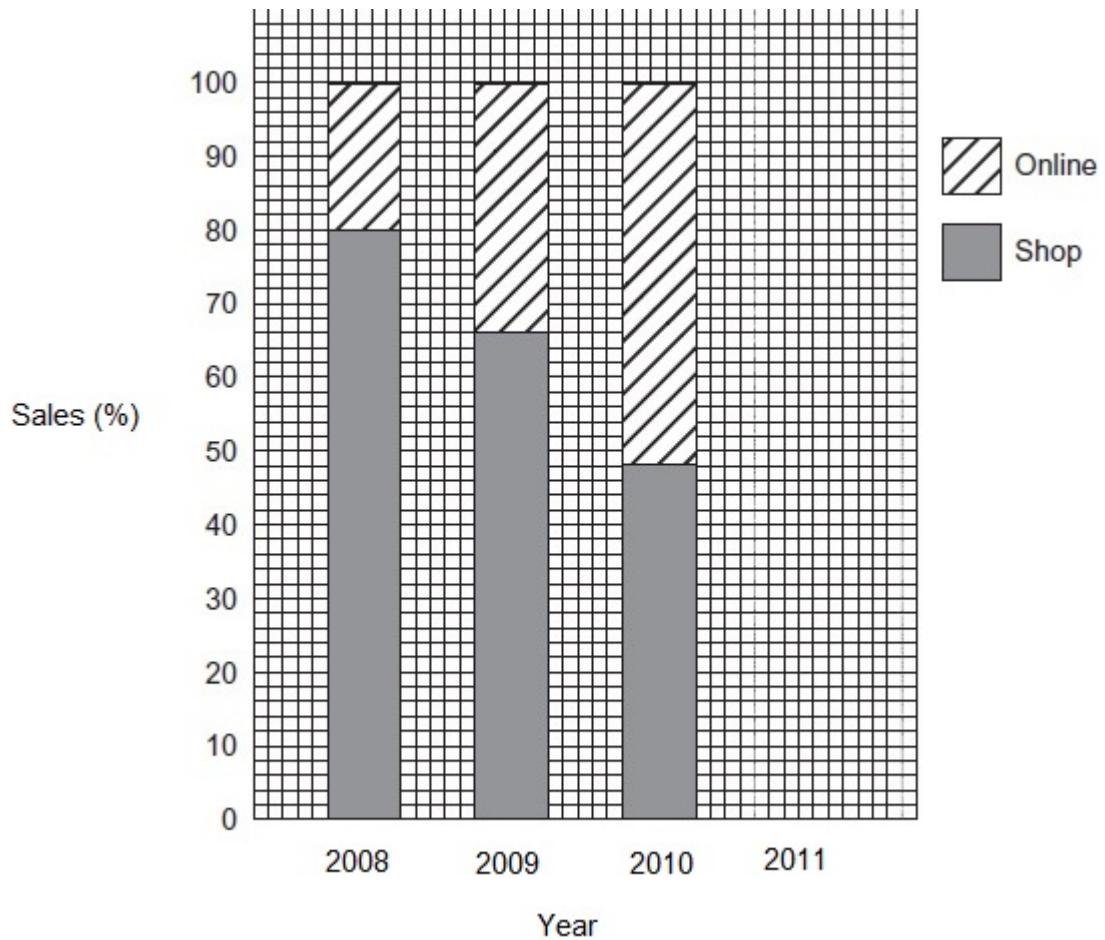
- (b) Work out the ratio of online sales to shop sales for **2008**.
Give your answer in its simplest form.

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Answer :

(2)
(Total 5 marks)

Q8.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.

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Answer :

(2)

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

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

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Answer

(1)

(Total 6 marks)

Q9.A fruit drink is made by mixing juice and lemonade in the ratio

$$\text{juice : lemonade} = 1 : 4$$

Juice costs £6.00 per litre.

Lemonade costs 50p per litre.

- (a) Show that 1 litre of the fruit drink costs £1.60 to make.

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(3)

(b) The fruit drink is sold for £2 a litre.

Work out the percentage profit.

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Answer %

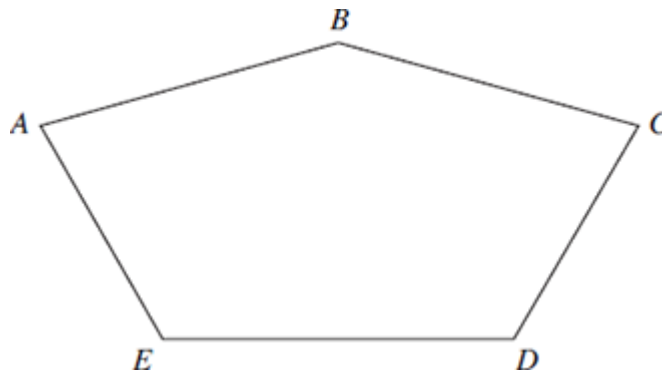
(2)

(Total 5 marks)

Q10. This pentagon has a **vertical** line of symmetry.

The ratio of angles $B : C : D = 6 : 3 : 4$

Not drawn accurately



Work out the size of angle B .

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Answer degrees

(Total 5 marks)

Q11. 120 adults complete a survey.
45 are men.

Write the ratio men : women in its simplest form.

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Answer

(Total 2 marks)