Q1. A company sends every item of mail by second class post.
Each item of mail is either a letter or a packet.

The tables show information about the cost of sending a letter by second class post and the cost of sending a packet by second class post.

.etter

Weight range	Second Class
0–100g	32p

'acket

Weight range	Second Class
0–100g	£1.17
101–250g	£1.51
251–500g	£1.95
501–750g	£2.36
751–1000g	£2.84

The company sent 420 items by second class post.
The ratio of the number of letters sent to the number of packets sent was 5 : 2.

$\frac{2}{3}$ of the packets sent were in the weight range 0 – 100 g.

The other packets sent were in the weight range 101 – 250 g.

Work out the total cost of sending the 420 items by second class post.

£ .....

(Total 5 marks)

Q2. A shop sells freezers and cookers.

The ratio of the number of freezers sold to the number of cookers sold is 5 : 2.
The shop sells a total of 140 freezers and cookers in one week.

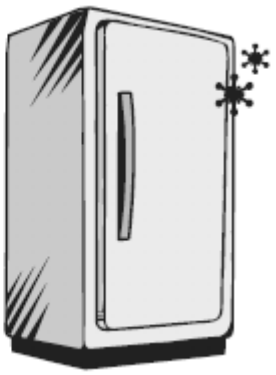
(a) Work out the number of freezers and the number of cookers sold that week.

(3)

Jake buys this freezer in a sale.
The price of the freezer is reduced by 20%.

(b) Work out how much Jake saves.

Freezer
Original Price
£145

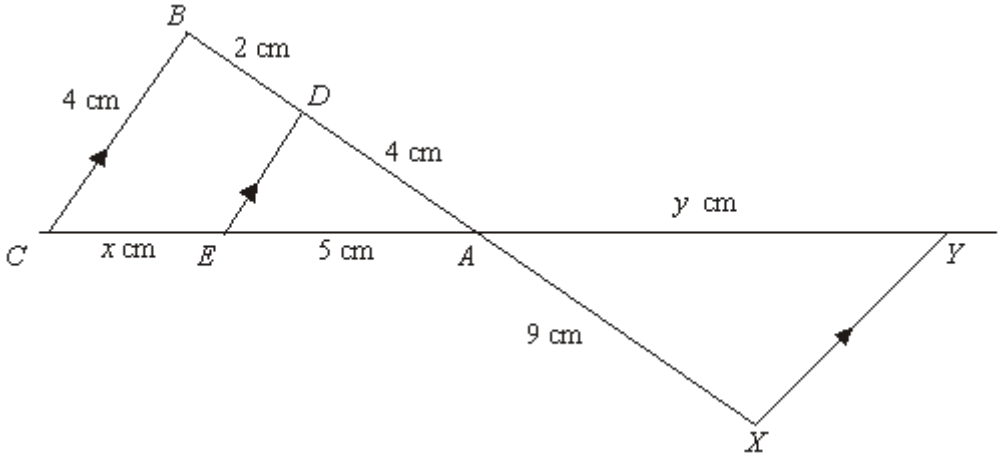


£ .....

(2)
(Total 5 marks)

Q3.

Diagram **NOT** accurately drawn



$CEAY$ and $BDAX$ are straight lines.
XY, ED and CB are parallel.
AE = 5 cm.
AX = 9 cm.
AD = 4 cm.
BC = 4 cm.
BD = 2 cm.

CE = x cm.
XY = y cm.

Find the value of x and the value of y.

x = ...

y = ...

(Total 4 marks)

M1.

Working	Answer	Mark	Additional Guidance
420 ÷ 7 = 60 5 × 60 = 300 2 × 60 = 120 120 ÷ 3 × 2 = 80 0.32 × 300 + 1.17 × 80 +1.51 × 40 96 × 93.60 + 60.40	250	5	**M1** for 420 ÷ (5 + 2) or 60 seen **M1** (dep) for 5 × '60' or 2 × '60' or 300 or 120 seen **M1** for '120' ÷ 3 × 2 oe **M1** for 32p × '300' + £1.17 × '80' + £1.51 × '40' **A1** for 250.00 or 250 SC B1 for £539
			Total for Question: 5 marks

M2.

	Working	Answer	Mark	Additional Guidance
(a)	140 × 5 ÷ 7 140 × 2 ÷ 7	100 4	3	**M1** for 140 × 5 ÷ 7 or 140 × 2 ÷ 7 or 140 ÷ ("2 + 5") × 2 or 140 ÷ ("2 + 5") × 5 **A1** for 100 and 40 cao **C1** for linking "cooker(s)" and "freezer(s)" correctly to final answers.
(b)	$145 \times \frac{20}{100}$	29	2	**M1** for 145 × 0.2 or 145 × $\frac{20}{100}$ or 14.5 × 2 or

Total for Question: 5 marks

M3.

Working	Answer	Mark	Additional Guidance
$\frac{x}{5}=\frac{2}{4}$ $\frac{y}{x+5}=\frac{9}{6}$ **or** $\frac{y}{9}=\frac{x+5}{6}$	x = 2.05 y = 11.25	4	**M1** a correct expression for x involving ratios of sides, e.g. $\frac{x}{5}=\frac{2}{4}$ oe **A1** cao

Total for Question: 4 marks

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Thirty per cent of candidates were awarded full marks for their response to this question. Unfortunately, a surprising number of candidates did not take into account the ratio of the number of letters to the number of packets thereby simplifying the question. These candidates could be given little credit for their attempts as they restricted their working to finding a simple fraction of a quantity followed by the calculation of a simple bill. Candidates who did realise the significance of the ratio often failed to show their working in a coherent way. This may have inhibited their ability to think through the processes involved and execute them accurately in the correct logical sequence.

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The first part of the question was often well answered and a pleasing number of candidates were able to score the communication mark. Many responses got at least two marks for the correct method with answers of 100 and 40 and many were able to link the number of freezers and cookers to their working in order to gain the final mark. However there were some who attempted the question using the 'build-up' method, this rarely led to the correct answer. Common errors were to divide 140 by 5, 2 or both to obtain 28 and 70 as answers. Some candidates even added these to obtain 98 without realising that the total should be 140.

Many candidates gained both marks in part (b) but the answer of 116 was commonly seen indicating that the question had not been read carefully enough. 116 was sometimes from the student finding 80% directly and often from the student finding 20% and subtracting £29 from £145. Dividing £145 by 20 and £145-20 unfortunately appeared quite often.

Finding 20% by 10% + 10% was sometimes successful but finding 80% by building up was usually unsuccessful.