

- 11 Karl has 5700 bricks.
He wants to put all the bricks into crates.

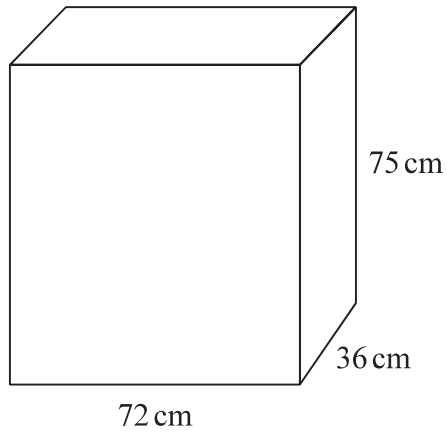
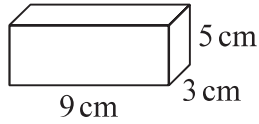


Diagram **NOT**
accurately drawn

Each brick is a cuboid measuring 9 cm by 3 cm by 5 cm.
Each crate is a cuboid measuring 72 cm by 36 cm by 75 cm.

Karl has 4 crates.

Is there enough room in the 4 crates for 5700 bricks?
Show your working clearly.

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(Total for Question 11 is 4 marks)



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12 Ravina counts the number of matches in each of 40 boxes of matches. The table shows information about her results.

Number of matches	Frequency
21	13
22	8
23	8
24	6
25	5

(a) Find the median of the numbers of matches in the boxes.

.....
(2)

(b) Work out the mean number of matches.

.....
(3)

(Total for Question 12 is 5 marks)



13 (a) Solve $3f - 5 = 11$

$f = \dots\dots\dots$
(2)

(b) Expand $w(w + 3)$

$\dots\dots\dots$
(1)

$y = 5e^2 + 20$

(c) Work out the value of y when $e = -3$

$y = \dots\dots\dots$
(2)

(d) Factorise $x^2 - 5x - 36$

$\dots\dots\dots$
(2)

(Total for Question 13 is 7 marks)



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14 Maria is going to make blackcurrant pies.
Here is a list of ingredients to make 6 blackcurrant pies.

<p>Blackcurrant pies Ingredients for 6 pies</p> <p>150 g flour 420 g blackcurrants 170 g sugar 95 g butter</p>

Maria has the following ingredients.

755 g of flour 1265 g of blackcurrants

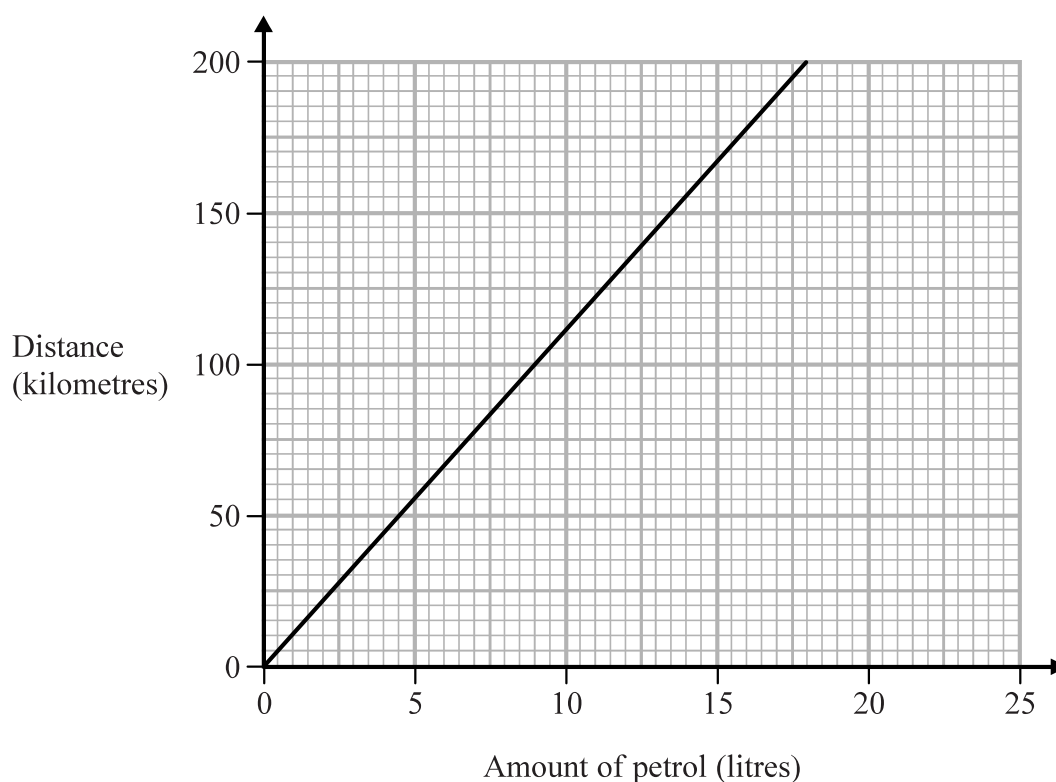
685 g of sugar 950 g of butter

Work out the greatest number of blackcurrant pies that Maria can make using her ingredients.
Show your working clearly.

(Total for Question 14 is 4 marks)



15 This graph can be used to find the distance travelled, in kilometres, by Chuck's car and the amount of petrol, in litres, used.



Chuck travels 150 kilometres in his car.

(a) Using the graph, find the amount of petrol used.

..... litres
(1)

Chuck lives in Fiji.

He puts petrol into the petrol tank of his car.

This petrol costs him 16.24 Fiji dollars.

1 litre of petrol in Fiji costs 2.03 Fiji dollars.

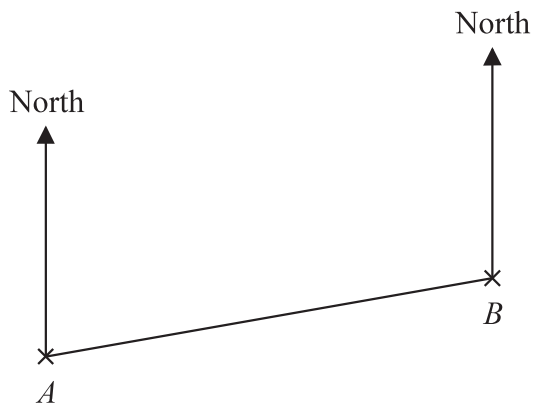
(b) Find the distance that Chuck's car travels on the petrol he put in his car.

..... kilometres
(3)

(Total for Question 15 is 4 marks)



16 The scale diagram shows the position of two statues, A and B , on a map.



Scale: 2 cm represents 1 km

(a) Measure the bearing of B from A .

.....
(1)

Another statue C is on a bearing of 120° from B .
Statue C is 4.5 km from B .

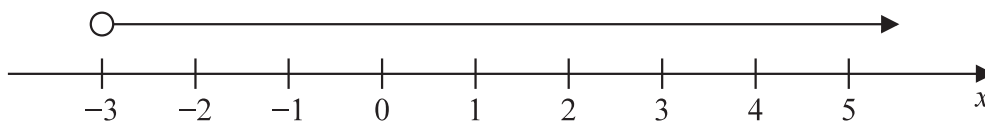
(b) Mark the position of statue C with a cross (\times).
Label your cross C .

(3)

(Total for Question 16 is 4 marks)



17 (a)



Write down the inequality shown on the number line.

.....
(1)

(b) Solve the inequality $4y - 13 \leq y + 8$

.....
(2)

(Total for Question 17 is 3 marks)

18 Show that $5\frac{2}{3} - 2\frac{3}{4} = 2\frac{11}{12}$

(Total for Question 18 is 3 marks)

