

11 Triangle ABC is an equilateral triangle of side 6 cm.

Using a ruler and compasses only, construct triangle ABC
You must show all your construction lines.

Side AB has been drawn for you.

A ————— B

(Total for Question 11 is 2 marks)

12 Mario is going to play two games on Saturday.

He will play one game on Saturday morning and one game on Saturday afternoon.

The following table shows the games from which he is going to choose.

Morning	Afternoon
Bridge (B)	Ludo (L)
Chess (C)	Mahjong (M)
Draughts (D)	Snakes and ladders (S)

(a) Write down all the possible combinations of games that Mario can play on Saturday.

.....

.....

.....

(2)



Question 12 continued

Mario asked 100 students in his school to name their favourite card game.

His results are shown in the two-way table below.

	Solitaire	Rummy	Whist	Total
Year 10	30	19	4	53
Year 11	17	18	12	47
Total	47	37	16	100

One of the students Mario asked is picked at random.

(b) Write down the probability that this student is in Year 11

.....
(1)

One of the Year 10 students is picked at random.

(c) Work out the probability that this student did **not** answer Whist.

.....
(2)

(Total for Question 12 is 5 marks)



13 The diagram shows a trapezium.

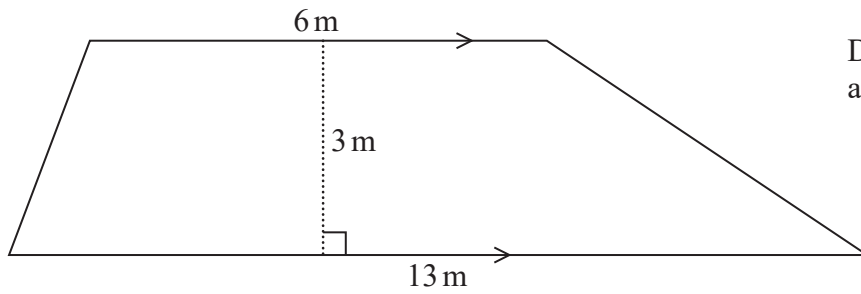


Diagram **NOT** accurately drawn

Work out the area of the trapezium.

.....m²

(Total for Question 13 is 2 marks)

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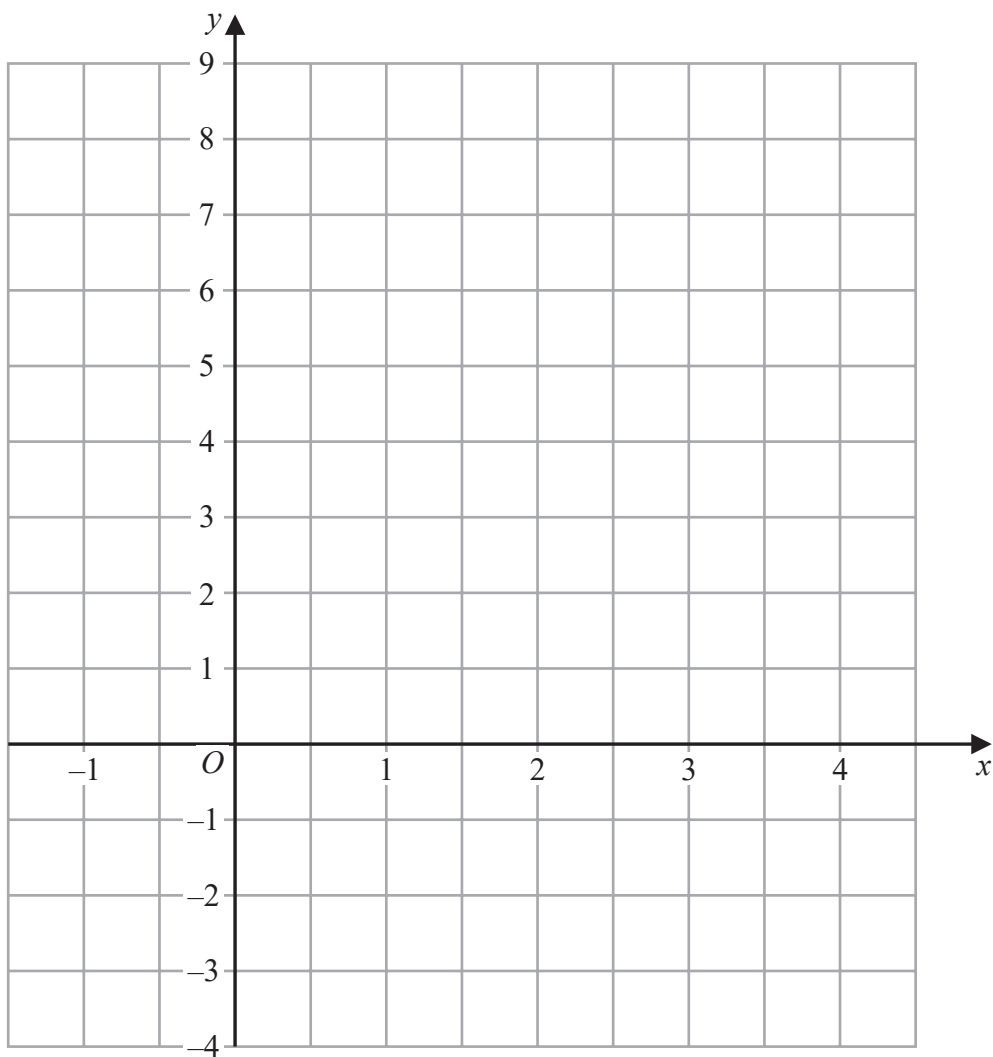


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14 On the grid, draw the graph of $y = 2x - 1$ for values of x from -1 to 4



(Total for Question 14 is 3 marks)



15 Kim spends $\$N$

Of this, she spends

40% on food

$\frac{1}{4}$ on clothes

and the rest on petrol

Kim spends $\$P$ on petrol.

Work out the ratio $P:N$ in the form $a:b$ where a and b are integers.

Give your answer in its simplest form.

(Total for Question 15 is 4 marks)

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16 The table shows information about the number of mobile phones owned by each of 40 families.

Number of mobile phones	Frequency
0	1
1	5
2	12
3	9
4	11
5	2

For the information in the table,

(a) write down the mode,

.....
(1)

(b) work out the mean.

.....
(3)

(Total for Question 16 is 4 marks)



- 17 Molly uses this number machine to work out the amount of tax that she has to pay on the money she earns.



When Molly works n hours the amount of tax she has to pay is £ T

Find a formula for T in terms of n

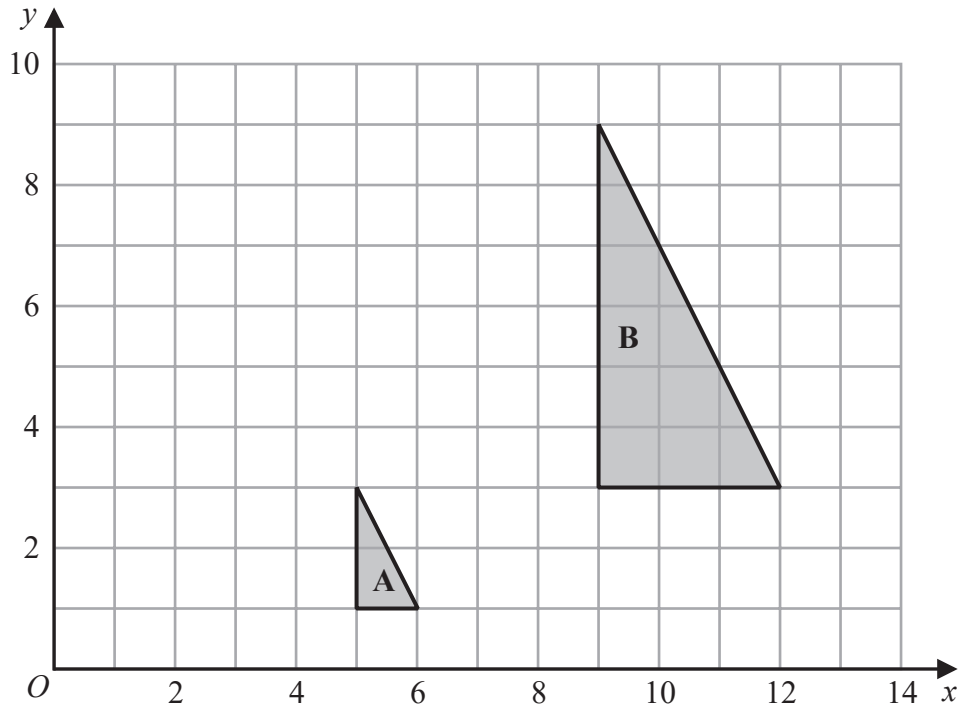
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(Total for Question 17 is 3 marks)

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- (a) Describe fully the single transformation that maps triangle **A** onto triangle **B**

(3)

- (b) On the grid above, translate triangle **A** by the vector $\begin{pmatrix} -4 \\ 3 \end{pmatrix}$

Label your triangle **C**

(1)

(Total for Question 18 is 4 marks)

