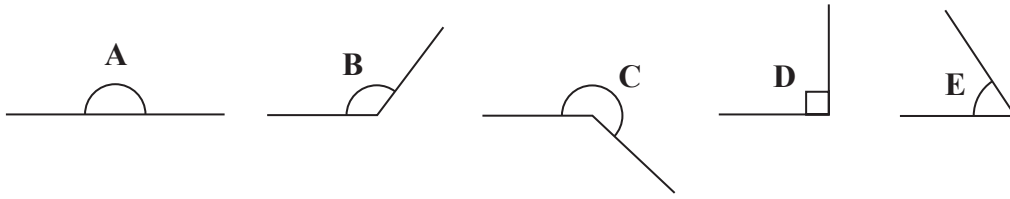


7 Five angles are marked in the following diagram.



(a) Write down the letter of the angle that is a reflex angle.

.....
(1)

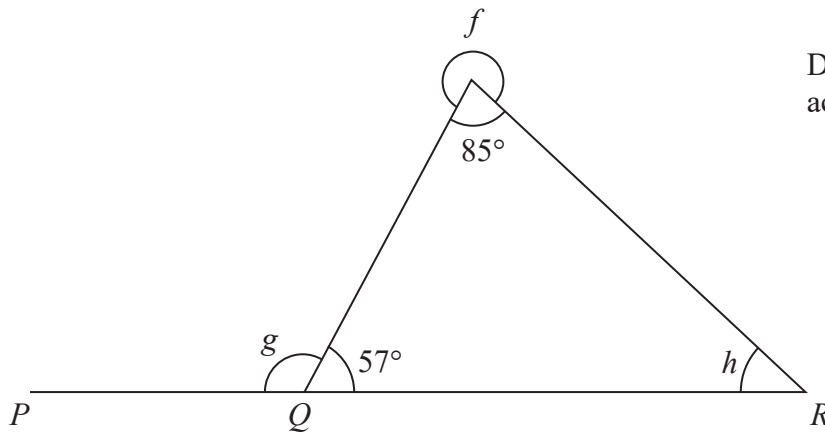


Diagram **NOT**
accurately drawn

(b) Work out the size of angle f .

.....
(1)

PQR is a straight line.

(c) Work out the size of angle g .

.....
(1)

(d) Work out the size of angle h .

.....
(2)

(Total for Question 7 is 5 marks)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

8 (a) Work out $(-9) - (-15)$

.....
(1)

(b) Work out $6 \times (-8)$

.....
(1)

(c) Work out $(-64) \div (-4)$

.....
(1)

(Total for Question 8 is 3 marks)



9 (a) Simplify $g + 2g + 3g - 4g$

.....
(1)

(b) Solve $6m = 18$

$m =$
(1)

$$P = 46 - 3st$$

(c) Work out the value of P when $s = 2$ and $t = 5$

$P =$
(2)

$$Q = 4e + 3f$$

(d) Work out the value of e when $Q = 43$ and $f = 7$

$e =$
(3)

(Total for Question 9 is 7 marks)



10 Eight people play a computer game.
Here are their scores.

7 10 8 9 12 9 10 10

(a) Work out the median score.

.....
(2)

(b) Find the range of their scores.

.....
(2)

One of the eight people is selected at random.

(c) Find the probability that the person selected had a score of 10 in the game.

.....
(1)

Helga has played the game many times.

She scored 9 or more in $\frac{5}{6}$ of these games.

(d) Work out an estimate for the probability that the next time Helga plays the game she scores **less** than 9

.....
(1)

Helga is going to play the game another 60 times.

(e) Work out an estimate for the number of times she will score 9 or more in these 60 games.

.....
(2)

(Total for Question 10 is 8 marks)



11 (a) Find the value of $\sqrt[3]{59.319}$

.....
(1)

(b) Find the value of 6^4

.....
(1)

(c) Work out the value of $\left(\frac{125.6}{4.7}\right)^2$

Write down all the figures on your calculator display.

.....
(2)

(d) Write your answer to part (c) correct to 3 significant figures.

.....
(1)

(Total for Question 11 is 5 marks)



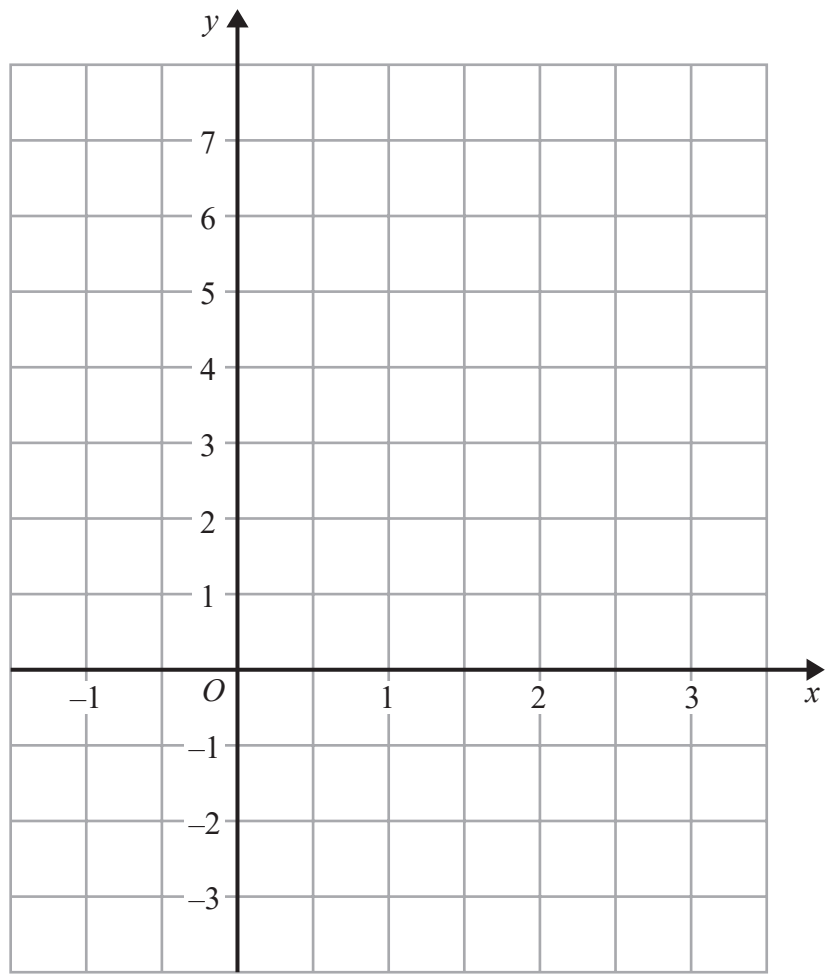
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12 (a) On the grid, draw

- (i) the line $y = 1$
- (ii) the graph of $y = 4 - 2x$ for values of x from -1 to 3



(4)

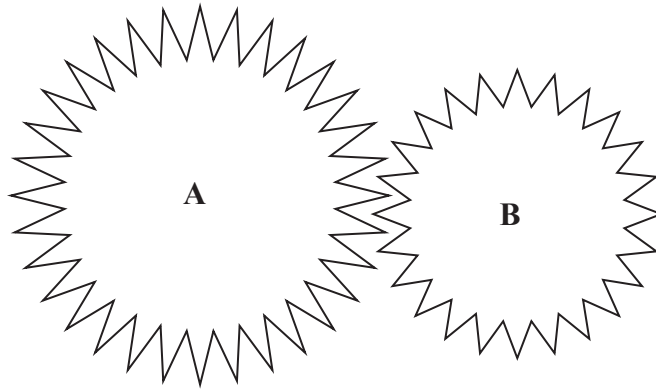
(b) Write down the coordinates of the point where the graph of $y = 4 - 2x$ crosses the line $y = 1$

(.....,)
(1)

(Total for Question 12 is 5 marks)



13 The diagram shows two cogs, **A** and **B**.



There are 32 teeth on cog **A**.
There are 24 teeth on cog **B**.

- (a) Write down the ratio of the number of teeth on cog **A** to the number of teeth on cog **B**.
Give your ratio in its simplest form.

.....
(2)

The two cogs both rotate.
Cog **A** completes 12 full turns while cog **B** completes 16 full turns.

- (b) Work out the number of full turns that cog **A** completes while cog **B** completes 60 full turns.

.....
(2)

(Total for Question 13 is 4 marks)

