Silver Level

Question Paper 6

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Difficulty Level	Silver
Booklet	Question Paper 6

Time Allowed: 56 minutes

Score: /46

Percentage: /100

Grade Boundaries:

9	8	7	6	5	4	3	2	1
>90%	80%	70%	60%	50%	40%	30%	20%	<20%

1   The table shows information about the time, in minutes, spent on homework by each of 32 pupils in one night.

Time (t minutes)	Number of pupils
$0 < t \leqslant 20$	7
$20 < t \leqslant 40$	16
$40 < t \leqslant 60$	3
$60 < t \leqslant 80$	6

(a) Calculate the percentage of the 32 pupils who spent more than 60 minutes on their homework.

.... %

(2)

(b) Calculate an estimate for the total time spent on homework by the 32 pupils.

.... minutes

(3)

(Total for Question 1 is 5 marks)

2 $M = 3x^2 - nx$

(a) Work out the value of M when

$x = -2$ and $n = 5$

$M =$ ....

(2)

(b) Work out the value of n when

$M = 12$ and $x = 4$

$n =$ ....

(3)

(Total for Question 2 is 5 marks)

3 (a) Simplify, leaving your answers in index form,

(i) $6^5 \times 6^2 \times 6$

....

(ii) $(9^7)^2$

....

(2)

(b) $\dfrac{5^n \times 5^3}{5^6} = 5^4$

Find the value of n.

$n = $ ....

(2)

(Total for Question 3 is 4 marks)

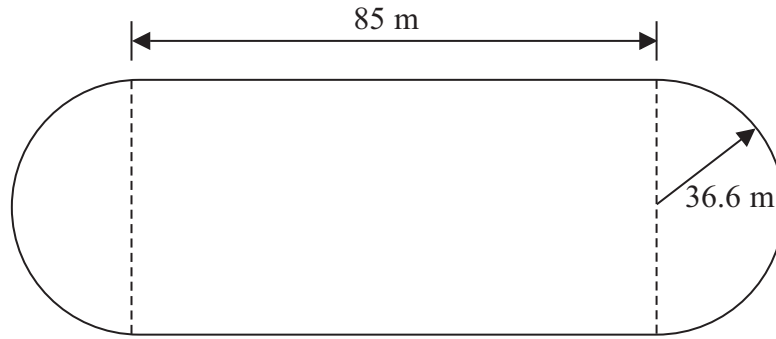**4** The diagram shows the path of an athlete on a running track.

Diagram **NOT**
accurately drawn

85 m

36.6 m

The path consists of two straight lengths and a semicircle at each end.
Each straight length is 85 metres.
Each semicircle has a radius of 36.6 metres.

Calculate the area enclosed by the path.
Give your answer correct to 3 significant figures.

.... m²

(Total for Question 4 is 4 marks)

5

6.8 m

Diagram **NOT**
accurately drawn

x m

52°
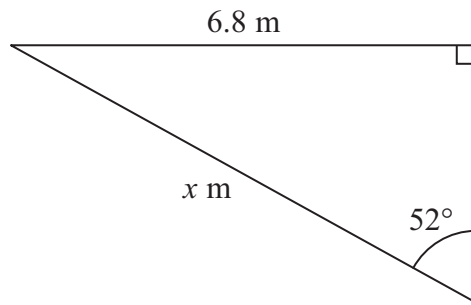
Calculate the value of x.
Give your answer correct to 3 significant figures.

x = ...

(Total for Question 5 is 3 marks)

6 (a) Write as an ordinary number

(i) 4.2×10^6

....

(ii) 3.82×10^{-4}

....

(2)

(b) Here are three numbers written in standard form.
Arrange these numbers in order of size.
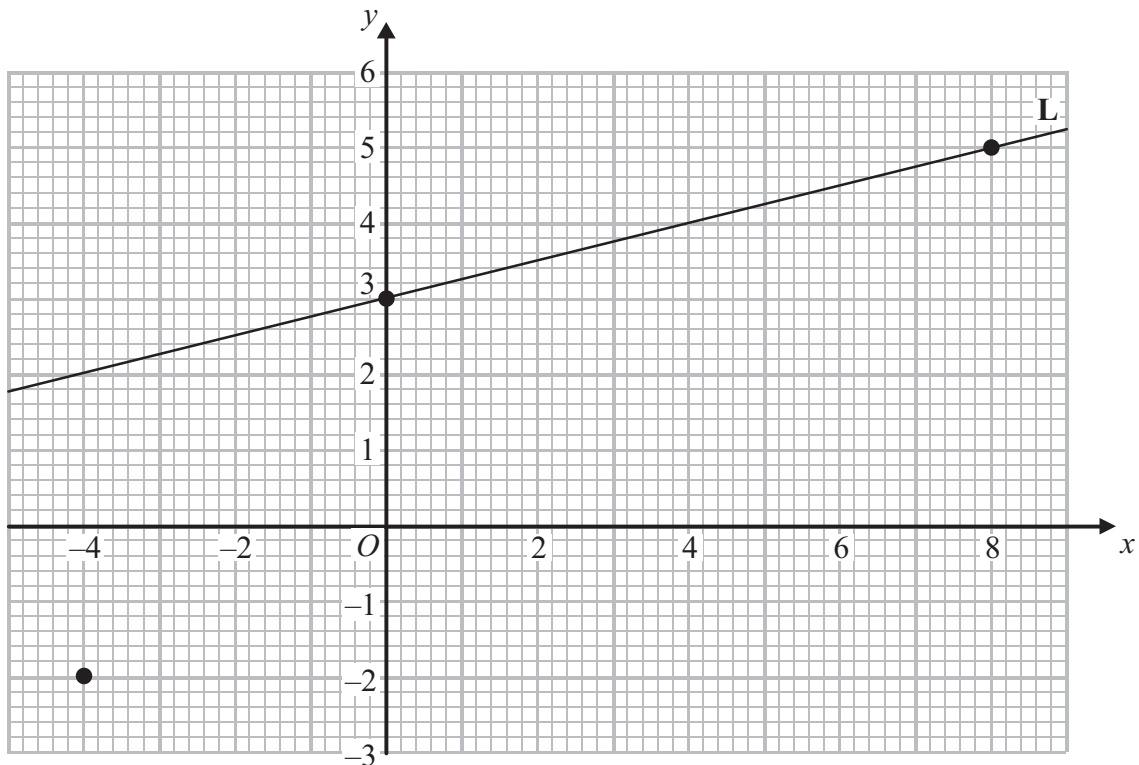Start with the smallest number.

5.6×10^{-7} 8.6×10^{-9} 5.64×10^{-8}

....

(2)

(Total for Question 6 is 4 marks)

7 The points with coordinates (0, 3) and (8, 5) lie on the straight line **L**.

(a) Work out the gradient of **L**.

....

(2)

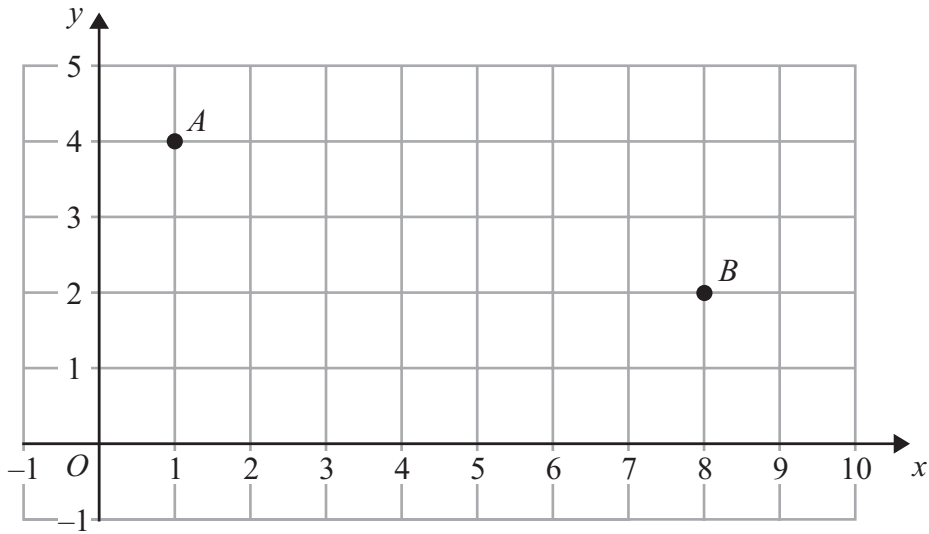(b) Write down an equation of **L**.

....

(1)

(c) Find an equation of the line which is parallel to **L** and which passes through the point (–4, –2)

....

(2)

(Total for Question 7 is 5 marks)

8 Two points, *A* and *B*, are plotted on a centimetre grid.
A has coordinates (1, 4) and *B* has coordinates (8, 2).

(a) Work out the coordinates of the midpoint of *AB*.

(.................... , ...)

(2)

(b) Use Pythagoras' Theorem to work out the length of *AB*.
Give your answer correct to 3 significant figures.

.... cm

(4)

(Total for Question 8 is 6 marks)

9 (a) Solve the inequalities $-6 \leqslant 3x < 9$

....

(2)

(b) n is an integer.

Write down all the values of n which satisfy $-6 \leqslant 3n < 9$

....

(2)

(Total for Question 9 is 4 marks)

10 The scale of a map is 1 : 25 000
On the map, the distance between two railway stations is 22 cm.

Work out the real distance between the two railway stations.
Give your answer in kilometres.

.... km

(Total for Question 10 is 3 marks)

11 The table shows information about the amount of money, in dollars, spent in a shop in one day by 80 people.

Money spent (*x* dollars)	Frequency
$0 < x \leqslant 20$	24
$20 < x \leqslant 40$	20
$40 < x \leqslant 60$	9
$60 < x \leqslant 80$	12
$80 < x \leqslant 100$	15

Work out an estimate for the total amount of money spent in the shop that day.

.... dollars

(Total for Question 11 is 3 marks)