Silver Level

Question Paper 11

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Difficulty Level	Silver
Booklet	Question Paper 11

Time Allowed: 59 minutes

Score: /49

Percentage: /100

Grade Boundaries:

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

1   Solve the simultaneous equations

$$3x + 4y = 6$$

$$5x + 6y = 11$$

Show clear algebraic working.

$x =$ ....

$y =$ ....

(Total for Question 1 is 4 marks)

2 Solve the inequality $\quad 3x^2 + 5 < 53$

....

(Total for Question 2 is 3 marks)

3 The table shows information about the times, in minutes, taken by 50 people to get to work.

Time taken (*t* minutes)	Frequency
$0 < t \leqslant 10$	6
$10 < t \leqslant 20$	10
$20 < t \leqslant 30$	19
$30 < t \leqslant 40$	15

Work out an estimate for the mean time taken to get to work.

.... minutes

(Total for Question 3 is 4 marks)

4 (a) Complete the table of values for $y = x^2 + 2x - 3$

x	−4	−3	−2	−1	0	1	2
y		0	−3	−4			5

(2)

(b) On the grid, draw the graph of $y = x^2 + 2x - 3$ for values of x from −4 to 2

(2)
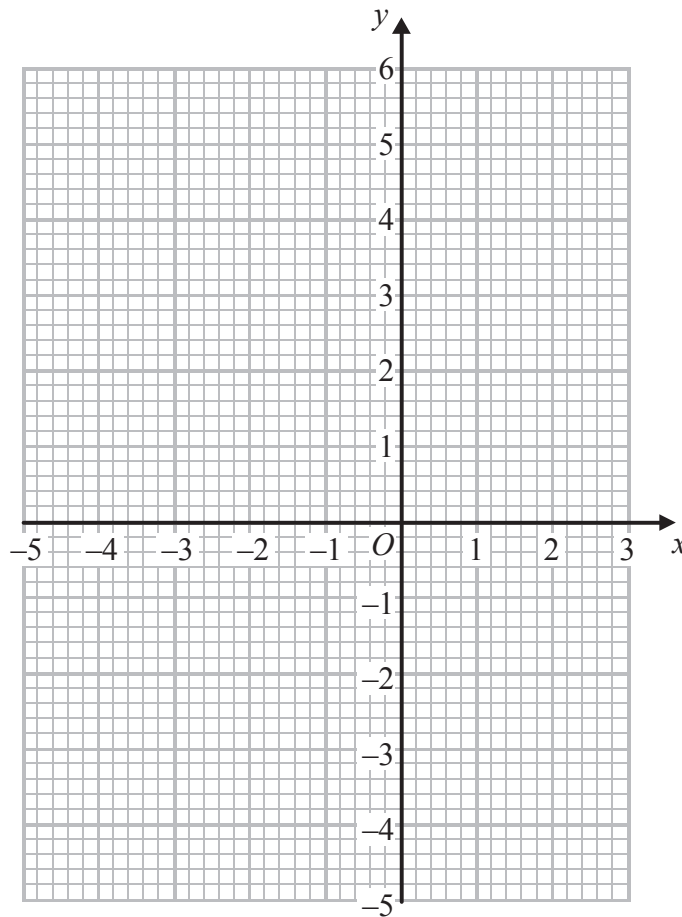
(Total for Question 4 is 4 marks)

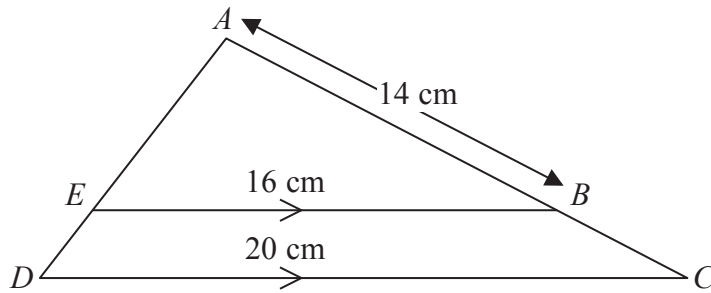**5** The diagram shows triangle *ADC*.

Diagram **NOT** accurately drawn

E is a point on *AD* and *B* is a point on *AC* so that *EB* is parallel to *DC*.
AB = 14 cm.
EB = 16 cm.
DC = 20 cm.

Calculate the length of *BC*.

.... cm

(Total for Question 5 is 3 marks)

6   The line **L** passes through the points $(0, -2)$ and $(6, 1)$

   (a) Find an equation of the line **L**.

....
(3)

   (b) Find an equation of the line that is parallel to **L** and which passes through
   the point $(4, -2)$

....
(2)

(Total for Question 6 is 5 marks)

7 (a) Write 1.2×10^{-5} as an ordinary number.

....

(1)

(b) Work out $7.9 \times 10^5 + 6 \times 10^4$
Give your answer in standard form.

....

(2)

(Total for Question 7 is 3 marks)

8 Solve the simultaneous equations

$3x + 2y = 7$

$4x - 3y = 15$

Show clear algebraic working.

$x =$ ....

$y =$ ....

(Total for Question 8 is 4 marks)

9 (a) Solve $5x^2 - 6x - 2 = 0$

Give your solutions correct to 3 significant figures.

Show your working clearly.

....

(3)

(b) Solve the inequality $\dfrac{m^2 + 3}{4} > 21$

Show clear algebraic working.

....

(4)
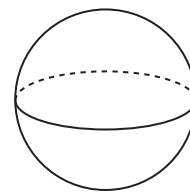
(Total for Question 9 is 7 marks)

10 A sphere has a surface area of 81π cm².

Work out the volume of the sphere.
Give your answer correct to 3 significant figures.

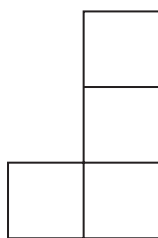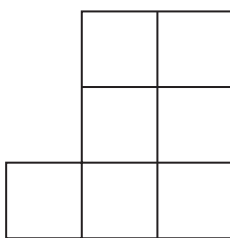........................... cm³

(Total for Question 10 is 4 marks)

11   Here is a sequence of patterns made from centimetre squares.
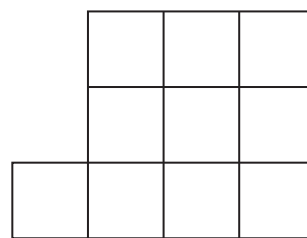
Pattern	Pattern	Pattern
number 1	number 2	number 3

(a) Find an expression, in terms of n, for the total number of centimetre squares
     in Pattern number n.

....

(2)

A pattern in this sequence has 88 centimetre squares.

(b) Work out the Pattern number of this pattern.

....

(2)

(Total for Question 11 is 4 marks)

12

Diagram **NOT**
accurately drawn

12 cm

6 cm

6 cm
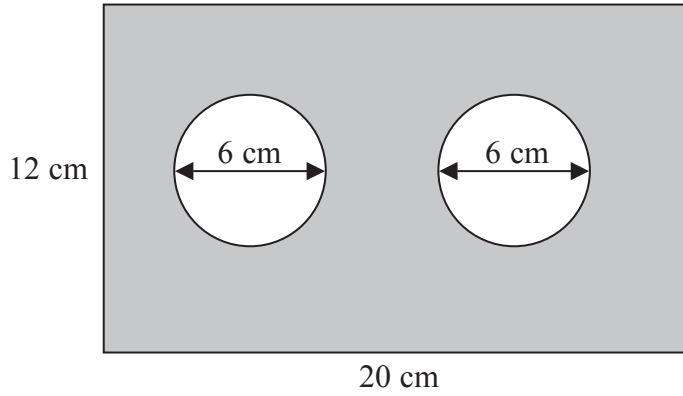
20 cm

The diagram shows a metal plate in the shape of a rectangle.
The rectangle has length 20 cm and width 12 cm.
    Two identical circles, each of diameter 6 cm, have been cut out of the plate.

Work out the area of the shaded region of the metal plate.
Give your answer correct to the nearest cm^2.

(Total for Question 12 is 4 marks)

.... cm^2