Silver Level

Question Paper 16

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Difficulty Level	Silver
Booklet	Question Paper 16

Time Allowed: **57 minutes**

Score: **/47**

Percentage: **/100**

Grade Boundaries:

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

1 (a) Solve

$$3x + 3y = 9$$

$$4x + 2y = 13$$

Show clear algebraic working.

$x =$ ....

$y =$ ....

(4)

L is a line parallel to the line with equation $4x + 2y = 13$

L passes through the point with coordinates $(3, -1)$

(b) Find an equation for the line **L**.

....

(3)

(Total for Question 1 is 7 marks)

2 *ABCD* is a trapezium.

Diagram **NOT**
accurately drawn
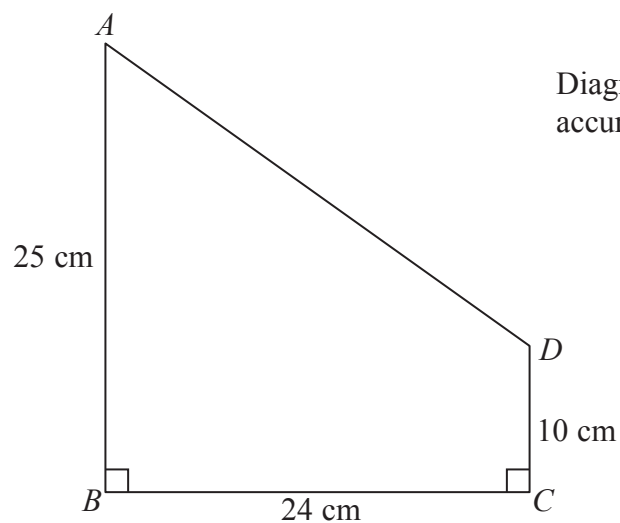
AB = 25 cm.
BC = 24 cm.
CD = 10 cm.

Angle *ABC* = angle *BCD* = 90°

Calculate the size of angle *CDA*.
Give your answer correct to 3 significant figures.

.... °

(Total for Question 2 is 4 marks)

3 (a) Complete the table of values for $y = \dfrac{1}{2}\left(x + \dfrac{9}{x}\right)$

x	1	1.5	2	3	4	5	6
y	5		3.25		3.125	3.4	

(2)

(b) Draw the graph of $y = \dfrac{1}{2}\left(x + \dfrac{9}{x}\right)$ for values of x from 1 to 6
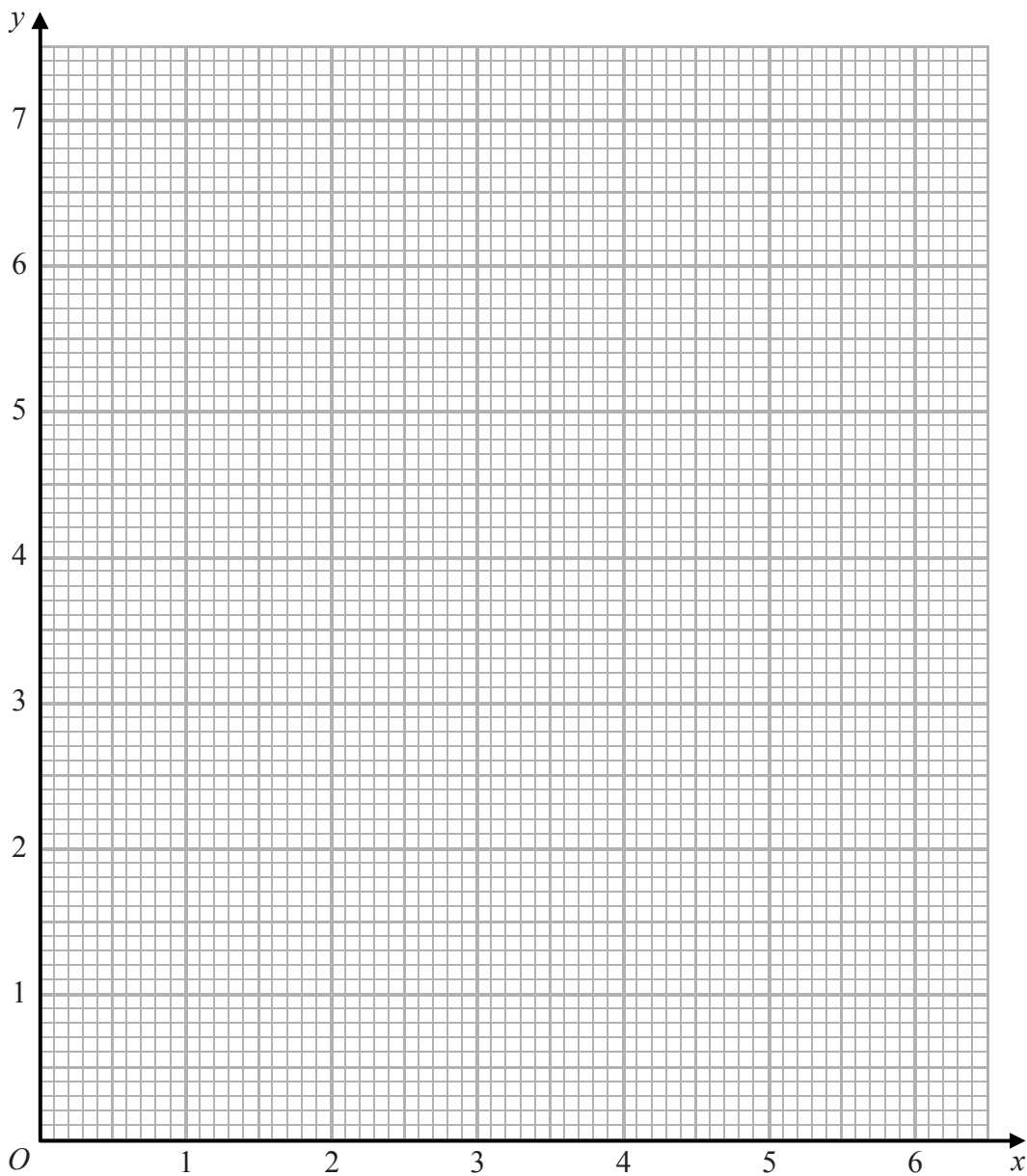
(2)

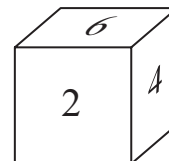(c) Use the graph to find estimates for the solutions of the equation $x + \dfrac{9}{x} = 7$

....

(2)

(Total for Question 3 is 6 marks)

4 Leonidas has a fair dice.

He throws the dice twice.

(a) Work out the probability that he gets the number 5 both times.

....

(2)

Alicia has a fair dice.

She throws the dice 3 times.

(b) Work out the probability that she gets the number 5 exactly once.

....

(3)

(Total for Question 4 is 5 marks)

5
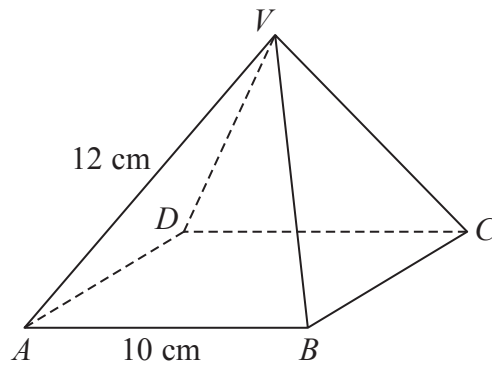

Diagram **NOT** accurately drawn

ABCD is the square base of the pyramid *VABCD*.

AB = BC = CD = DA = 10 cm.
VA = VB = VC = VD = 12 cm.

Calculate the height of the pyramid.
Give your answer correct to 3 significant figures.

.... cm

(Total for Question 5 is 4 marks)

6 The table shows information about the numbers of fish caught by 40 people in one day.

Number of fish	Frequency
0	2
1	12
2	15
3	8
5	2
8	1

(a) Work out the mean number of fish caught.

....
(3)

(b) Work out what percentage of the 40 people caught less than 2 fish.

.... %
(2)

(Total for Question 6 is 5 marks)

7 Each exterior angle of a regular polygon is 15°

(a) How many sides has the regular polygon?

....

(2)

The diagram shows 3 identical regular pentagons.
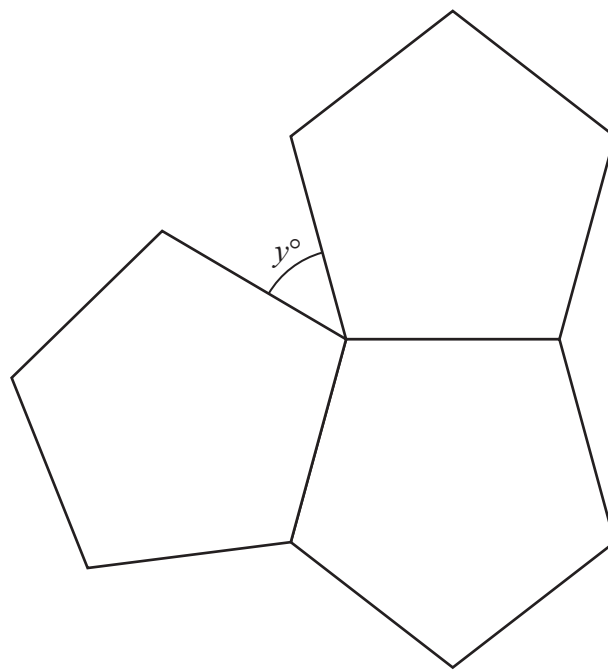
Diagram **NOT**
accurately drawn

(b) Work out the value of y.

$y = $.............................

(3)

(Total for Question 7 is 5 marks)

8
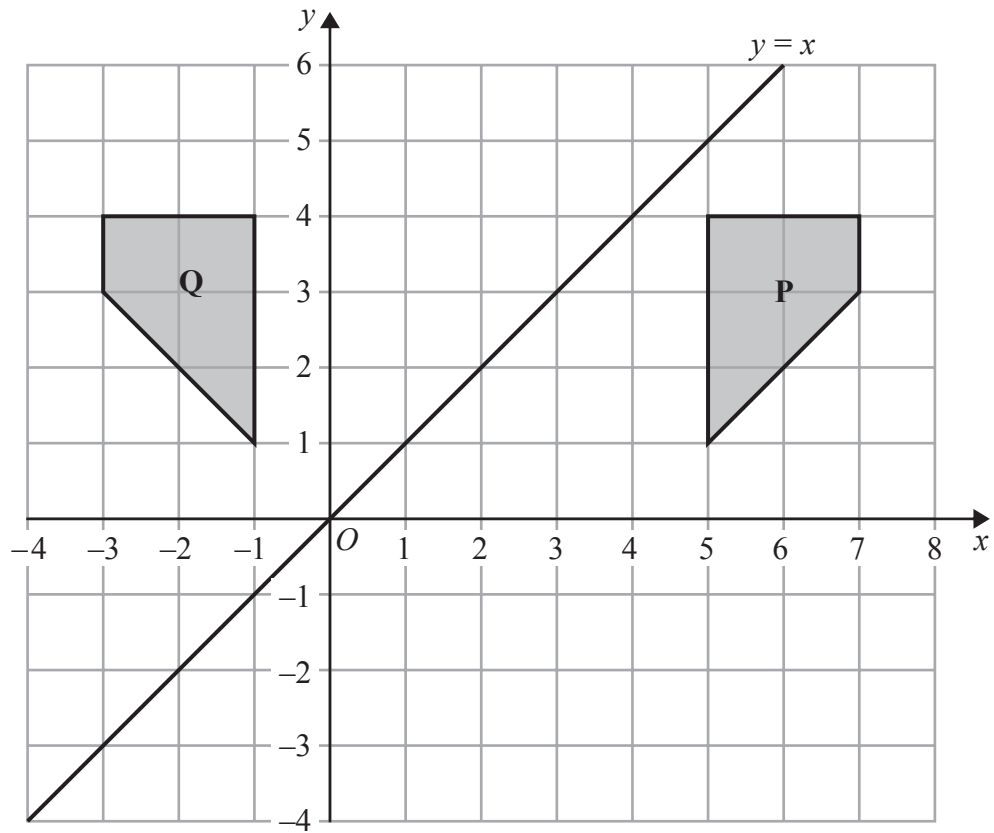
(a) Describe fully the single transformation which maps shape **P** onto shape **Q**.

....

....
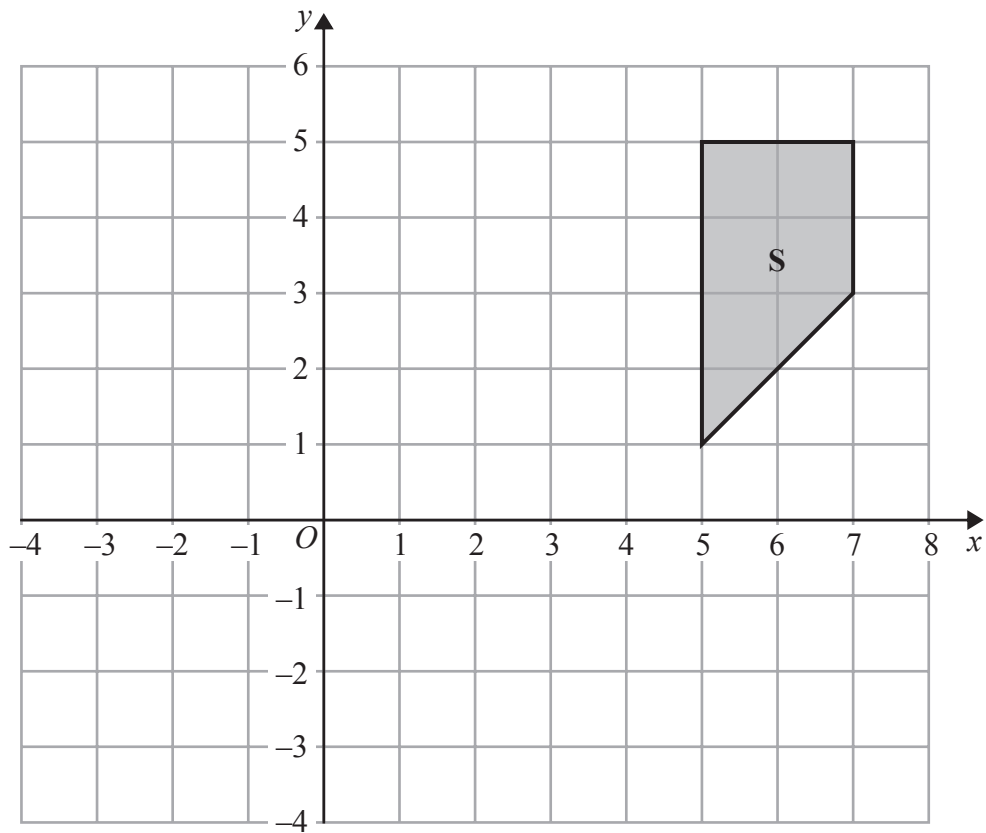
(2)

(b) Reflect the shape **Q** in the line $y = x$.
Label the new shape **R**.

(2)

(c) Enlarge shape **S** with scale factor $\frac{1}{2}$ and centre (1, 3)

(2)

(Total for Question 8 is 6 marks)

9 The mean height of a group of 6 children is 165 cm.
One child, whose height is 155 cm, leaves the group.

Find the mean height of the remaining 5 children.

.... cm

(Total for Question 9 is 3 marks)

10   Make r the subject of the formula $A = 4\pi r^2$ where r is positive.

$r =$...........................

(Total for Question 10 is 2 marks)