Bronze Level

Question Paper 9

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Difficulty Level	Bronze
Booklet	Question Paper 9

Time Allowed: 56 minutes

Score: /46

Percentage: /100

Grade Boundaries:

9	8	7	6	5	4	3	2	1
>95%	85%	75%	65%	55%	45%	35%	25%	<25%

1 (a) Simplify $\dfrac{y^8}{y^3}$

....

(1)

(b) Solve the inequality $\quad 4(x + 3) > 8$

....

(2)

(Total for Question 1 is 3 marks)

2   A school has 840 pupils and 40 teachers.

(a) Find the ratio of the number of pupils to the number of teachers.
    Give your ratio in the form *n* : 1

.... **: 1**

(2)

In Year 11 at the school, the ratio of the number of pupils who study Chemistry to the number of pupils who study Physics is 3 : 2

(b) 105 pupils in Year 11 study Chemistry.
    Work out the number of pupils in Year 11 who study Physics.

....

(2)

For the 105 pupils who study Chemistry, the ratio of the number of boys to the number of girls is 4 : 3

(c) Work out the number of girls in Year 11 who study Chemistry.

....

(2)

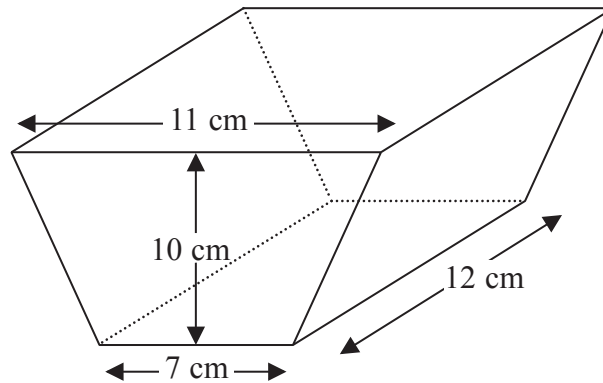**(Total for Question 2 is 6 marks)**

3

Diagram **NOT** accurately drawn

The diagram shows a solid prism.
The cross section of the prism is a trapezium.
The lengths of the parallel sides of the trapezium are 11 cm and 7 cm.
The perpendicular distance between the parallel sides of the trapezium is 10 cm.
The length of the prism is 12 cm.

(a) Work out the area of the trapezium.

.... cm^2

(2)

(b) Work out the volume of the prism.

.... cm^3

(2)

(Total for Question 3 is 4 marks)

4   Solve $6(3y + 5) = 39$
Show clear algebraic working.

$y =$ ....

(Total for Question 4 is 3 marks)

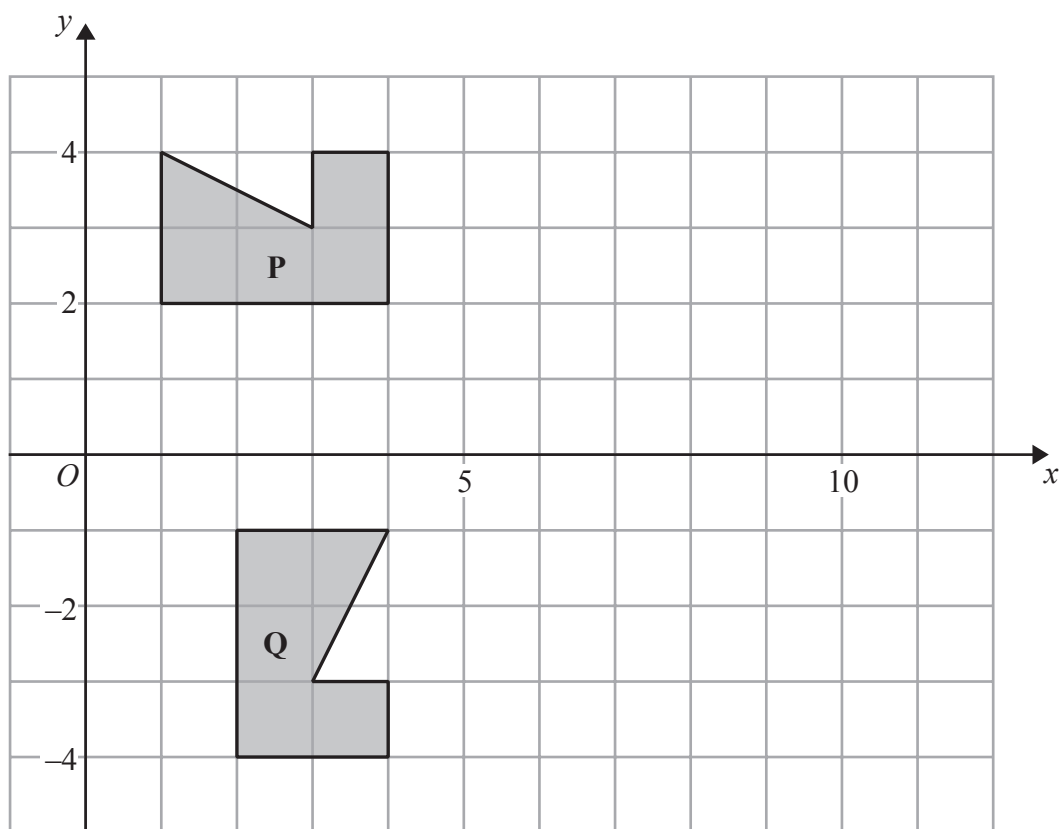**5**   The table gives information about the numbers of goals scored by a football team in 30 matches.

Number of goals scored	Frequency
0	2
1	10
2	7
3	6
4	3
5	2

Find the mean number of goals scored.

....

(Total for Question 5 is 3 marks)

6 The diagram shows a shape **P**, and a shape **Q**.

Describe fully the single transformation which maps shape **P** onto shape **Q**.

....

....

(Total for Question 6 is 3 marks)

7 (a) Simplify $k \times k \times k \times k \times k$

....

(1)

(b) Expand $2(7t - 3)$

....

(1)

(c) Expand and simplify fully

(i) $4(2y + 6) - 3(2y - 7)$

....

(ii) $(x - 6)(x - 4)$

....

(4)

(d) Simplify fully $\dfrac{v^4 \times v^7}{v^5}$

....

(2)

(Total for Question 7 is 8 marks)

8   A square hole is cut from a circular piece of card.

Diagram **NOT**
accurately drawn

3.2 cm

3.2 cm
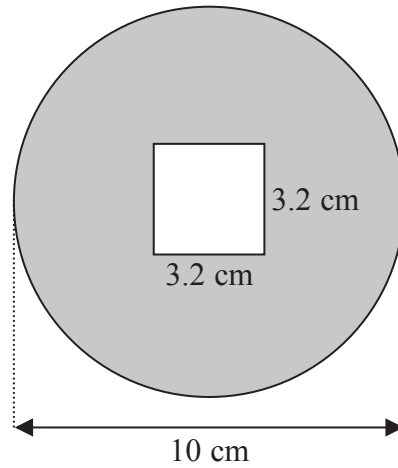
10 cm

The square has sides of length 3.2 cm.
The diameter of the circular piece of card is 10 cm.

Work out the area of the shaded region.
Give your answer correct to 3 significant figures.

.... cm^2

(Total for Question 8 is 4 marks)

9 $\mathscr{E}=$ {positive whole numbers **less than** 13}
  A = {even numbers}
  B = {multiples of 3}
  C = {prime numbers}

  (a) List the members of the set

   (i) $A \cap B$

....

   (ii) $B \cup C$

....

(2)

  (b) Is it true that $14 \in A$?

   Tick (✓) the appropriate box.

   Yes   No

   ☐   ☐

   Explain your answer.

....

(1)

(Total for Question 9 is 3 marks)

10 (a) Write $3 \times 3 \times 3 \times 3 \times 3$ as a single power of 3

....

(1)

(b) Write $\dfrac{7^5 \times 7^9}{7^6}$ as a single power of 7

....

(2)

(Total for Question 10 is 3 marks)

11 Here are Ryan's scores in nine French tests.

$$4 \qquad 6 \qquad 4 \qquad 7 \qquad 8 \qquad a \qquad 6 \qquad 7 \qquad 7$$

The mean of Ryan's nine scores is 6

Work out the value of a.

$a =$ ....
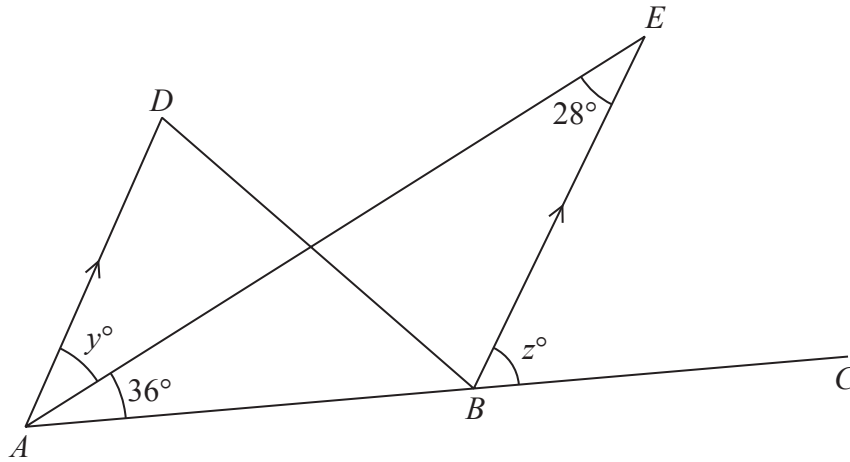
(Total for Question 11 is 3 marks)

12

Diagram **NOT** accurately drawn

ADB and *AEB* are triangles.
ABC is a straight line.
AD is parallel to *BE*.

(a) Find the value of *y*.

$y =$ ....
(1)

(b) Find the value of *z*.

$z =$ ....
(2)

(Total for Question 12 is 3 marks)