Silver Level

Question Paper 7

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Difficulty Level	Silver
Booklet	Question Paper 7

Time Allowed: 60 minutes

Score: /50

Percentage: /100

Grade Boundaries:

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

1   Peter and John play two games of badminton against each other.
    For each game, the probability that Peter wins is 0.15

    (a) Complete the probability tree diagram.

    First Game   Second Game

                            Peter
              0.15   wins

    ....   Peter
                            does
                            not win

                                                                      (3)

    (b) Calculate the probability that Peter wins both games.

                                              ....
                                                                      (2)

                                              (Total for Question 1 is 5 marks)

2   The Venn diagram shows a universal set $\mathscr{E}$ and 3 sets A, B and C.
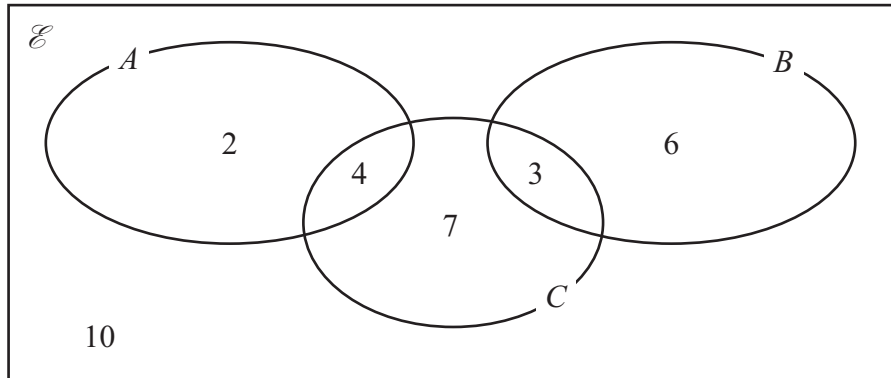
2, 4, 7, 3, 6 and 10 represent **numbers** of elements.

Find

(i)   n $(A \cup B)$

....

(ii) n (B')

....

(iii) n $(A \cap C')$

....

(iv) n $(B' \cap C')$

....

(Total for Question 2 is 4 marks)

3 The table shows information about the number of letters in the first name of each of 50 people.

Number of letters	Frequency
3	2
4	5
5	14
6	19
7	10

(i) Work out the mean number of letters in the first names of the 50 people.

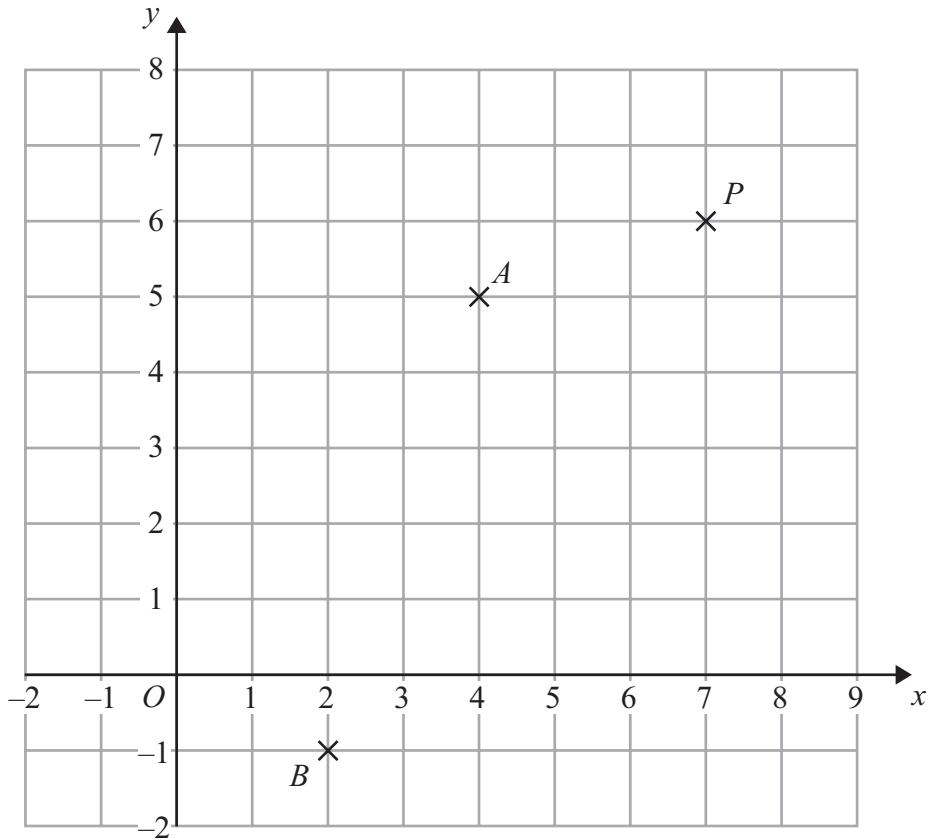...............................

(ii) One more person joins the 50 people.
   The mean number of letters in the first names of the 51 people is less than the mean number of letters in the first names of the 50 people.

   Write down the greatest number of letters in the first name of the person who joins the group.

....

(Total for Question 3 is 4 marks)

4   The diagram shows three points, *A*, *B* and *P*, on a centimetre grid.

The point *A* has coordinates (4, 5) and the point *B* has coordinates (2, −1).

(a) Find the coordinates of the midpoint of *AB*.

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

(2)

AB is a diameter of a circle.
P is the point (7, 6)
C is the point on the circle such that *PA* = *PC*.

(b) On the diagram, mark with a cross (✕) the point *C*.
     Label your point *C*.

(2)

(Total for Question 4 is 4 marks)

5 A shop, *Furniture 4U*, had a sale.

(a) In the sale, normal prices were reduced by 15%.

(i) The normal price of a table was $280

Work out the sale price of the table.

$ ....

(ii) The normal price of a chair was reduced in the sale by $24

Work out the normal price of the chair.

$ ....
(6)

(b) Ruth, Suha and Yasmin went to the sale.
The amounts of money spent by Ruth, Suha and Yasmin were in the ratios 2 : 3 : 7
Ruth and Suha spent a total of $320 in the sale.

Work out the amount of money Yasmin spent in the sale.

$ ....
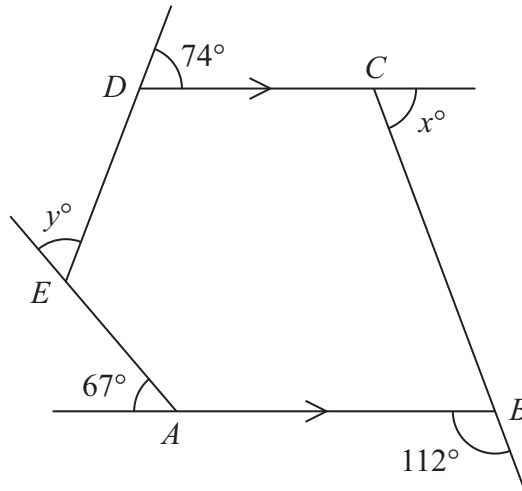(3)

(Total for Question 5 is 9 marks)

6

Diagram **NOT**
accurately drawn

The diagram shows a pentagon *ABCDE*.
DC is parallel to *AB*.

The size of an exterior angle at *A* is 67°
The size of an exterior angle at *B* is 112°
The size of an exterior angle at *C* is *x*°
The size of an exterior angle at *D* is 74°
The size of an exterior angle at *E* is *y*°

(a) (i) Work out the value of *x*.

x = ...

(ii) Work out the value of *y*.

y = ...
(4)

(b) Work out the sum of the interior angles of the pentagon *ABCDE*.

°
....
(2)

(Total for Question 6 is 6 marks)

7
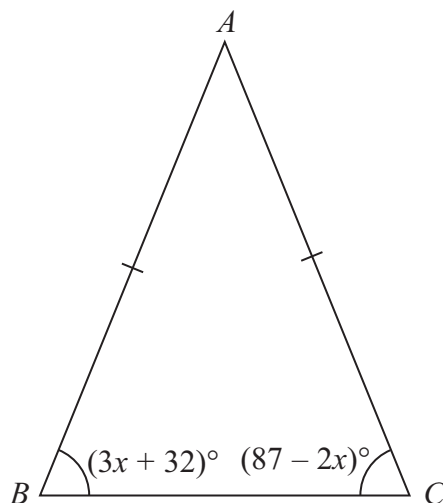
Diagram **NOT** accurately drawn

In the isosceles triangle *ABC*,
AB = *AC*
angle *B* = $(3x + 32)°$
angle *C* = $(87 − 2x)°$

Work out the value of *x*.
Show clear algebraic working.

x = ...

(Total for Question 7 is 4 marks)

8 $A = 2^3 \times 3^2 \times 5^4$

$B = 3^5 \times 5 \times 7^3$

Find the Highest Common Factor (HCF) of A and B.

....

(Total for Question 8 is 2 marks)

9

Diagram **NOT** accurately drawn

O

B

$26°$

P

A
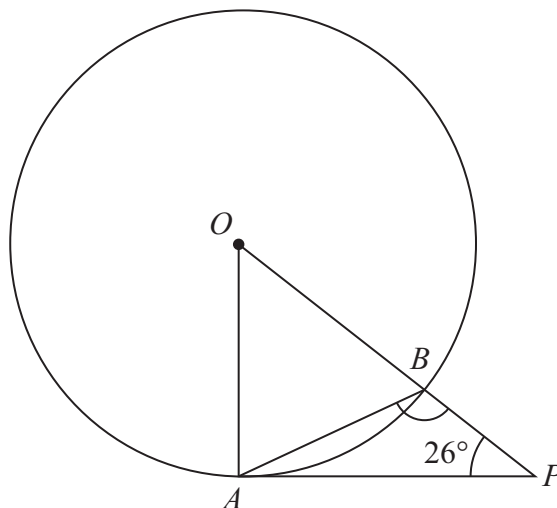
A and B are points on a circle, centre O.
PA is the tangent to the circle at A.
OBP is a straight line.
Angle $APO = 26°$

Calculate the size of angle ABP.

.... °

(Total for Question 9 is 3 marks)

10 (a) Solve the simultaneous equations

$$5x + 3y = 9$$
$$7x - 2y = 25$$

Show clear algebraic working.

$x = $ ....

$y = $ ....

(4)

(b) *P* is the point of intersection of the lines with equations $5x + 3y = 9$ and $7x - 2y = 25$

Write down the coordinates of *P*.

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

(1)

(Total for Question 10 is 5 marks)

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11 Jomo invested an amount of money at 4% per annum **compound interest**.
At the end of 2 years, the value of his investment was £3380

How much of the £3380 was interest?

£............................

(Total for Question 11 is 4 marks)