FOUNDATION

1.12 Coordinates: 30-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 30 minutes

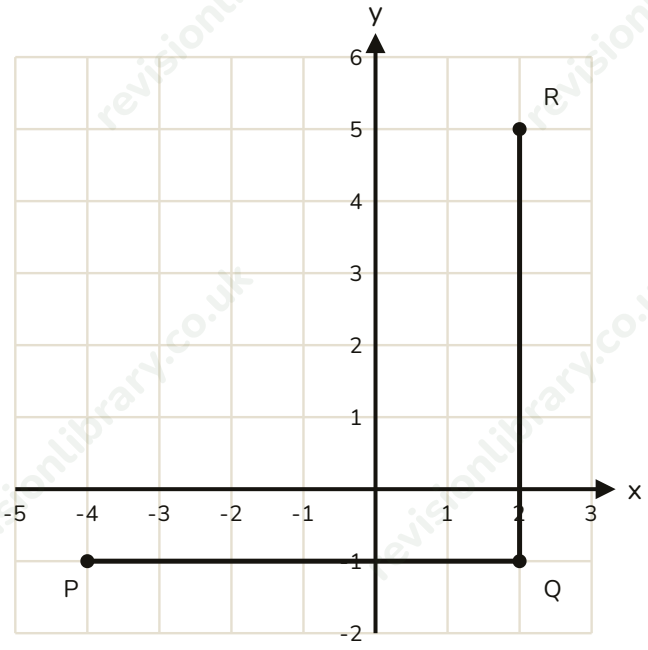
Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 PQRS is a square drawn on a coordinate grid, with sides parallel to the axes. P = (-4, -1), Q = (2, -1), R = (2, 5). Find the coordinates of S.

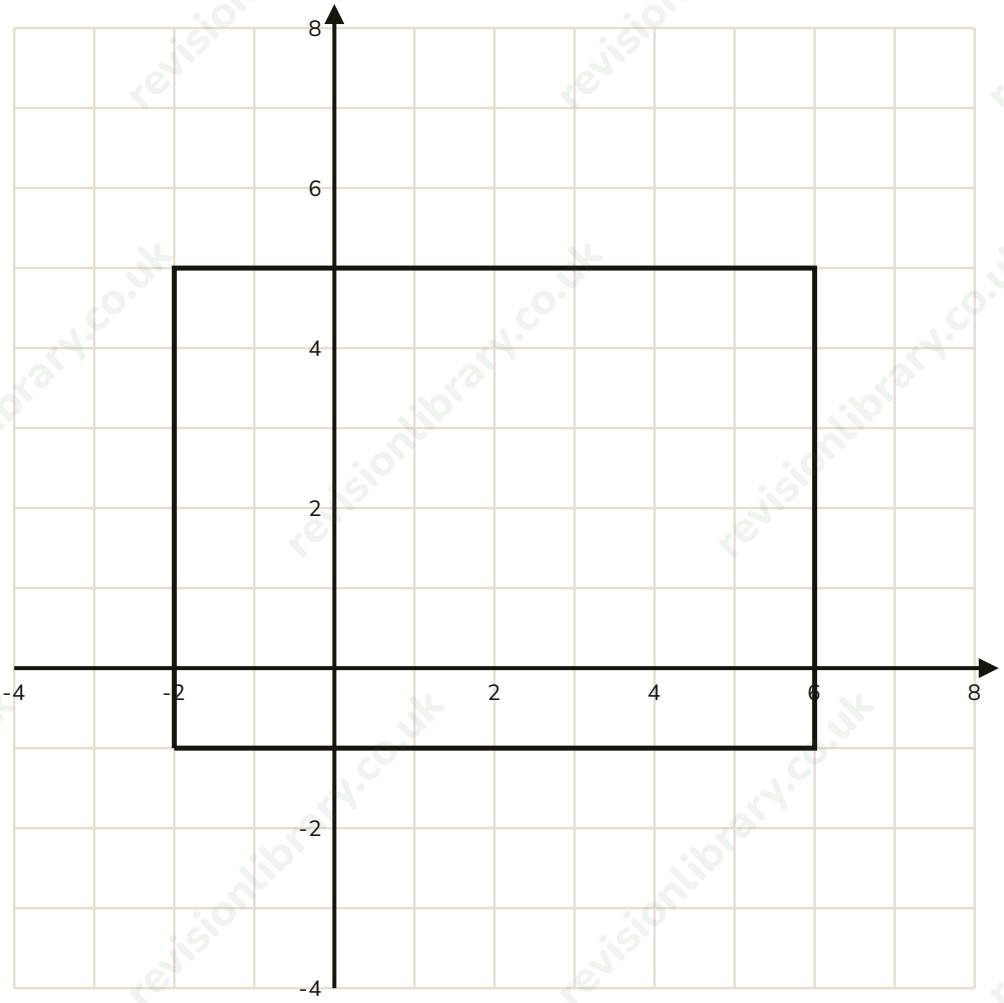
Diagram NOT accurately drawn



(Total for Question 1 is 3 marks)

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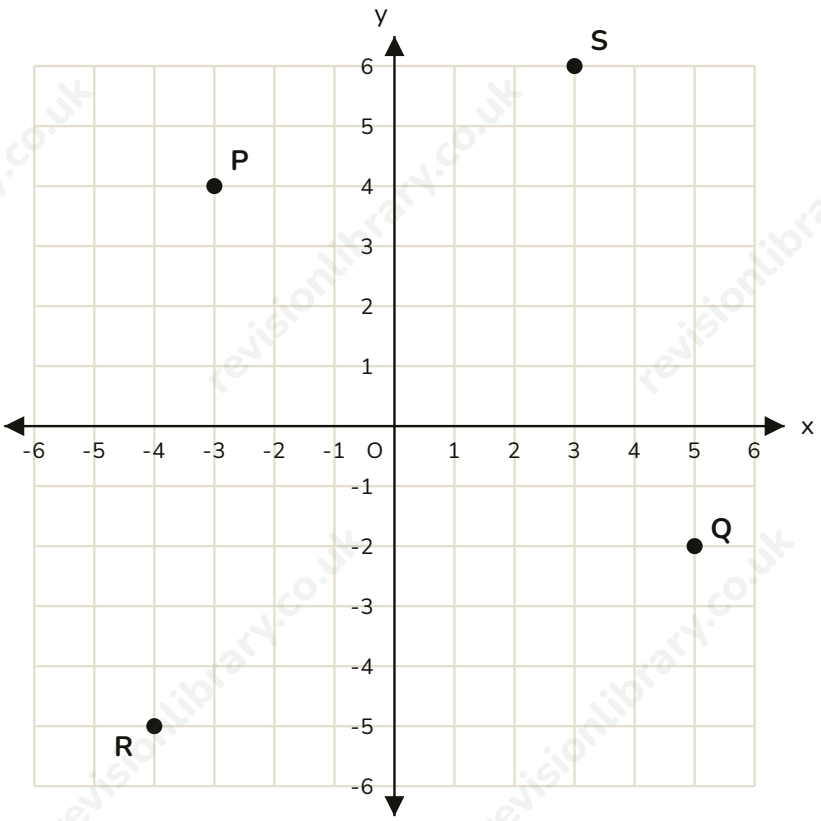
2 A rectangle has vertices at (-2, -1), (6, -1), (6, 5) and (-2, 5). Work out (a) the perimeter and (b) the area of the rectangle. Each unit on the axes is 1 cm.



(Total for Question 2 is 3 marks)

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3 The diagram shows a coordinate grid. The x-axis and y-axis are both numbered from -6 to 6. Point P is plotted 3 squares to the left of the y-axis and 4 squares above the x-axis. Point Q is plotted 5 squares to the right of the y-axis and 2 squares below the x-axis. Point R is plotted 4 squares to the left of the y-axis and 5 squares below the x-axis. Point S is plotted 3 squares to the right of the y-axis and 6 squares above the x-axis.



(a) Write down the coordinates of point P. **(1)**

.....

(b) Write down the coordinates of point Q. **(1)**

.....

(c) Write down the coordinates of point R. **(1)**

.....

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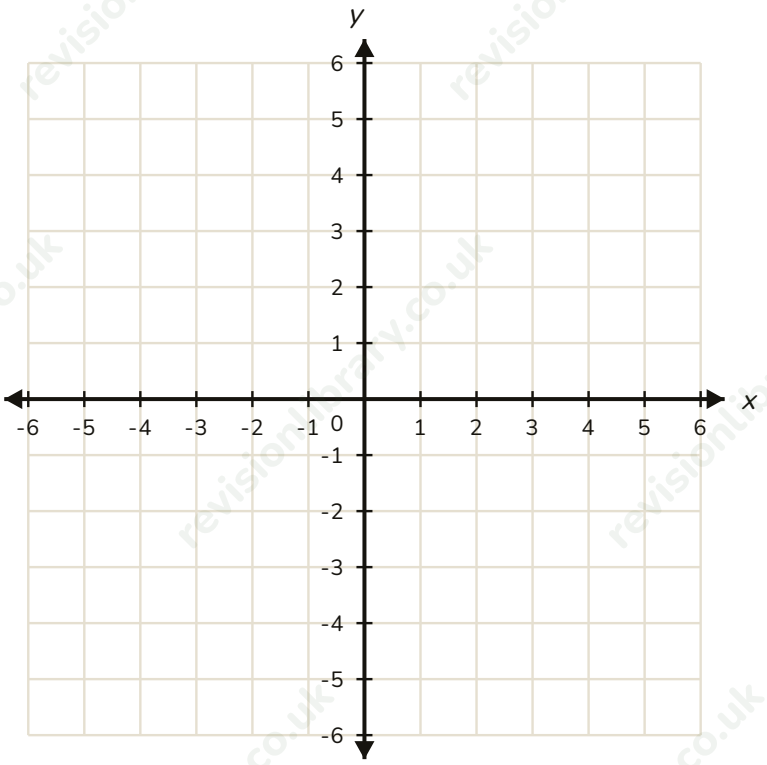
(d) Write down the coordinates of point S. **(1)**

.....

(Total for Question 3 is 4 marks)

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4 A coordinate grid has the x-axis and y-axis both numbered from -6 to 6. Plot each of the following points on the grid and label it with the correct letter.



(a) Plot the point T(-5, -3). **(1)**

(b) Plot the point U(4, 5). **(1)**

(c) Plot the point V(-2, 6). **(1)**

(d) Plot the point W(6, -4). **(1)**

(Total for Question 4 is 4 marks)

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5 The point (-3, 8) is plotted on a coordinate grid. Decide whether each statement is True or False.

(a) The point lies to the left of the y-axis. **(1)**

(b) The point lies below the x-axis. **(1)**

(c) The x-coordinate is negative. **(1)**

(d) The y-coordinate is negative. **(1)**

(Total for Question 5 is 4 marks)

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6 On a treasure map, positions are given as coordinates (across, up) on a grid. The chest is at (2, 3). The key is 5 units to the right and 4 units up from the chest.

(a) Work out the coordinates of the key. **(2)**

.....

(b) The cave entrance lies on the y-axis, 6 units above the origin. Write down the coordinates of the cave entrance. **(1)**

.....

(Total for Question 6 is 3 marks)

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7 Answer the following questions about coordinates.

(a) Circle the letter of the point that lies in the fourth quadrant. **(1)**
A) (-3, 5) B) (4, -6) C) (-2, -7) D) (0, 8)

- ☐ A) (-3, 5)
- ☐ B) (4, -6)
- ☐ C) (-2, -7)
- ☐ D) (0, 8)

(b) Circle the letter of the point that lies exactly on the x-axis. **(1)**
A) (0, -5) B) (5, 0) C) (-5, 5) D) (5, 5)

- ☐ A) (0, -5)
- ☐ B) (5, 0)
- ☐ C) (-5, 5)
- ☐ D) (5, 5)

(Total for Question 7 is 2 marks)

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Mark scheme · 1.12 Coordinates: 30-minute Pack

Question 1

side length of the square found, e.g. PQ = 6 or QR = 6, oe	**M1**
correct method for S, e.g. same x-coordinate as P and same y-coordinate as R	**M1**
(-4, 5) cao	**A1**

Answer: (-4, 5)

Question 2

finds side lengths	**M1**
perimeter 28 cm	**A1**
area 48 cm²	**A1**

Answer: perimeter 28 cm, area 48 cm^2

Question 3

(a) (-3, 4) cao	**B1**

(a) Answer: (-3, 4)

(b) (5, -2) cao	**B1**

(b) Answer: (5, -2)

(c) (-4, -5) cao	**B1**

(c) Answer: (-4, -5)

(d) (3, 6) cao	**B1**

(d) Answer: (3, 6)

Question 4

(a) point plotted at (-5, -3), labelled T	**B1**

(a) Answer: Point plotted 5 left, 3 down

(b) point plotted at (4, 5), labelled U	**B1**

(b) Answer: Point plotted 4 right, 5 up

(c) point plotted at (-2, 6), labelled V	**B1**

(c) Answer: Point plotted 2 left, 6 up

(d) point plotted at (6, -4), labelled W	**B1**

(d) Answer: Point plotted 6 right, 4 down

Question 5

(a) True cao	**B1**

(a) Answer: True

(b) False cao	**B1**

(b) Answer: False

(c) True cao	**B1**

(c) Answer: True

(d) False cao	**B1**

(d) Answer: False

Question 6

(a) correct method, e.g. 2 + 5 and/or 3 + 4	**M1**
(a) (7, 7) cao	**A1**

(a) Answer: (7, 7)

(b) (0, 6) cao	**B1**

(b) Answer: (0, 6)

Question 7

(a) B cao	**B1**

(a) Answer: B

(b) B cao	**B1**

(b) Answer: B

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