



Aberdare Community School
Mathematics Department

WJEC GCSE
Higher – Non Calculator
Algebra

Coordinates

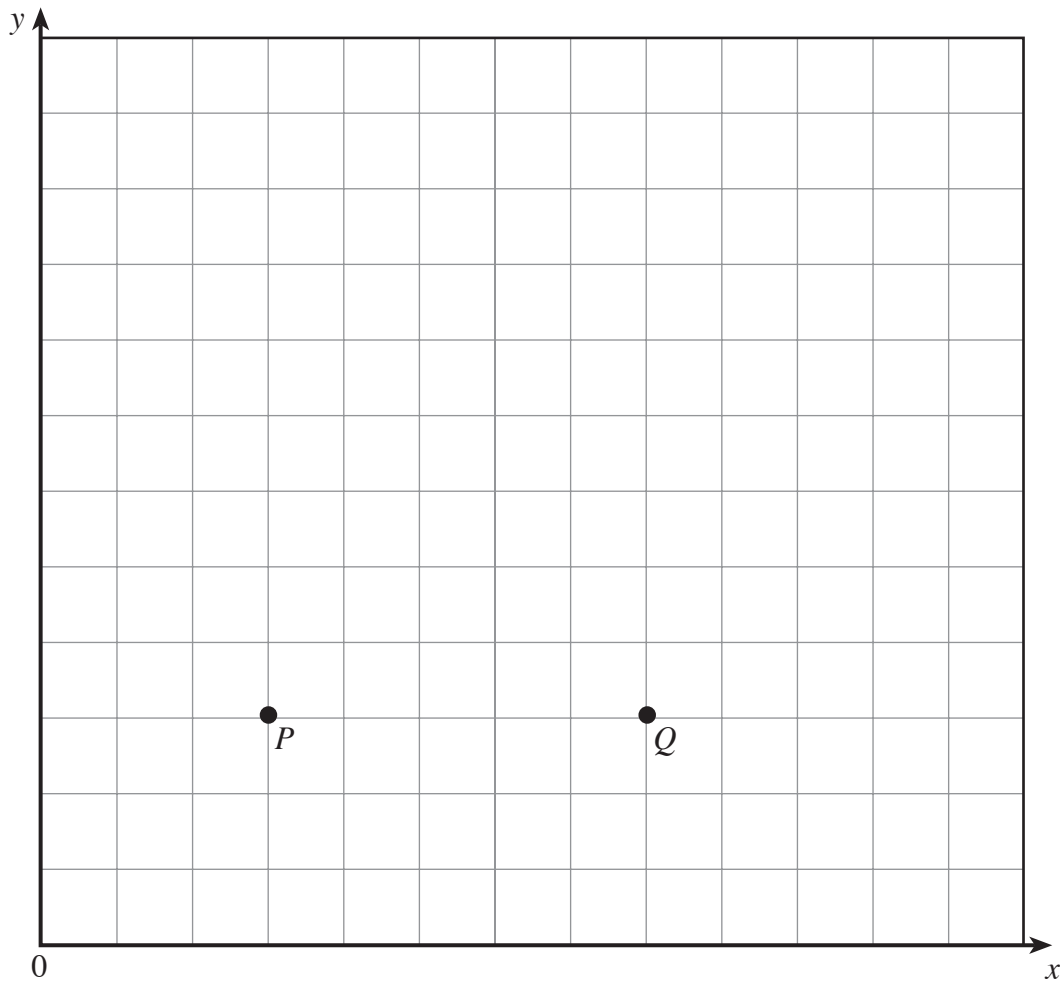
Name:

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3.



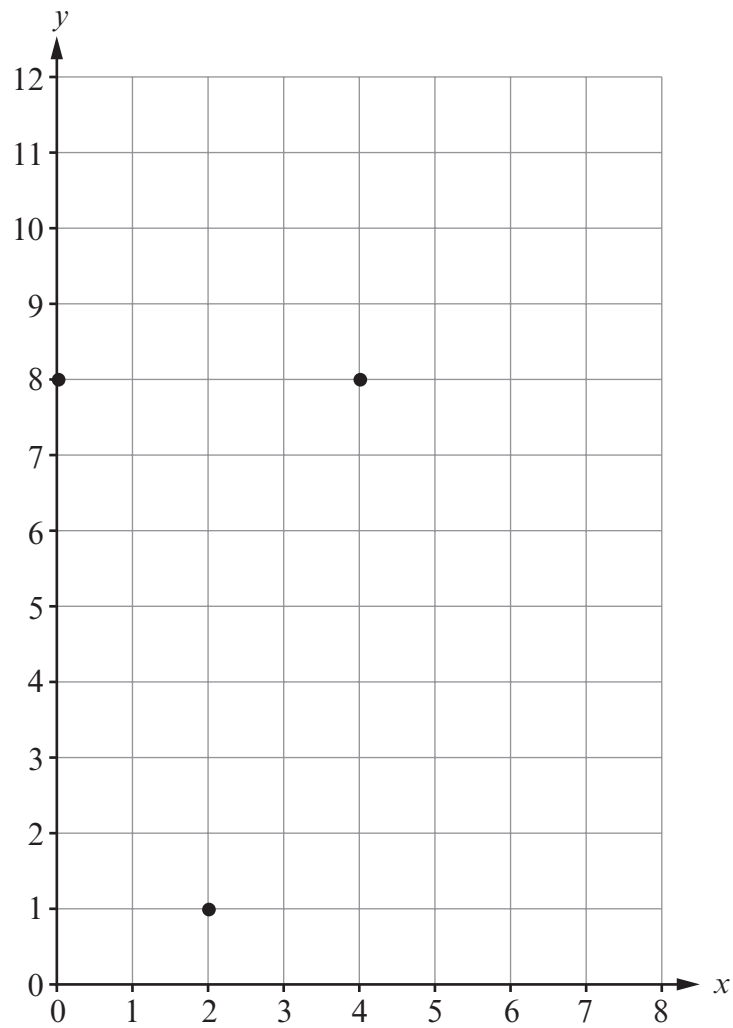
The points $P(3, 3)$ and $Q(8, 3)$ are shown, on a centimetre-squared grid, on the above diagram. Another point R is to be marked on the diagram to form a right-angled triangle PQR with an area of 7.5 cm^2 .

Write down the coordinates of **each** of the four possible positions of the point R .

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

[4]

1. Three points $(0, 8)$, $(4, 8)$ and $(2, 1)$ are shown on the grid below.

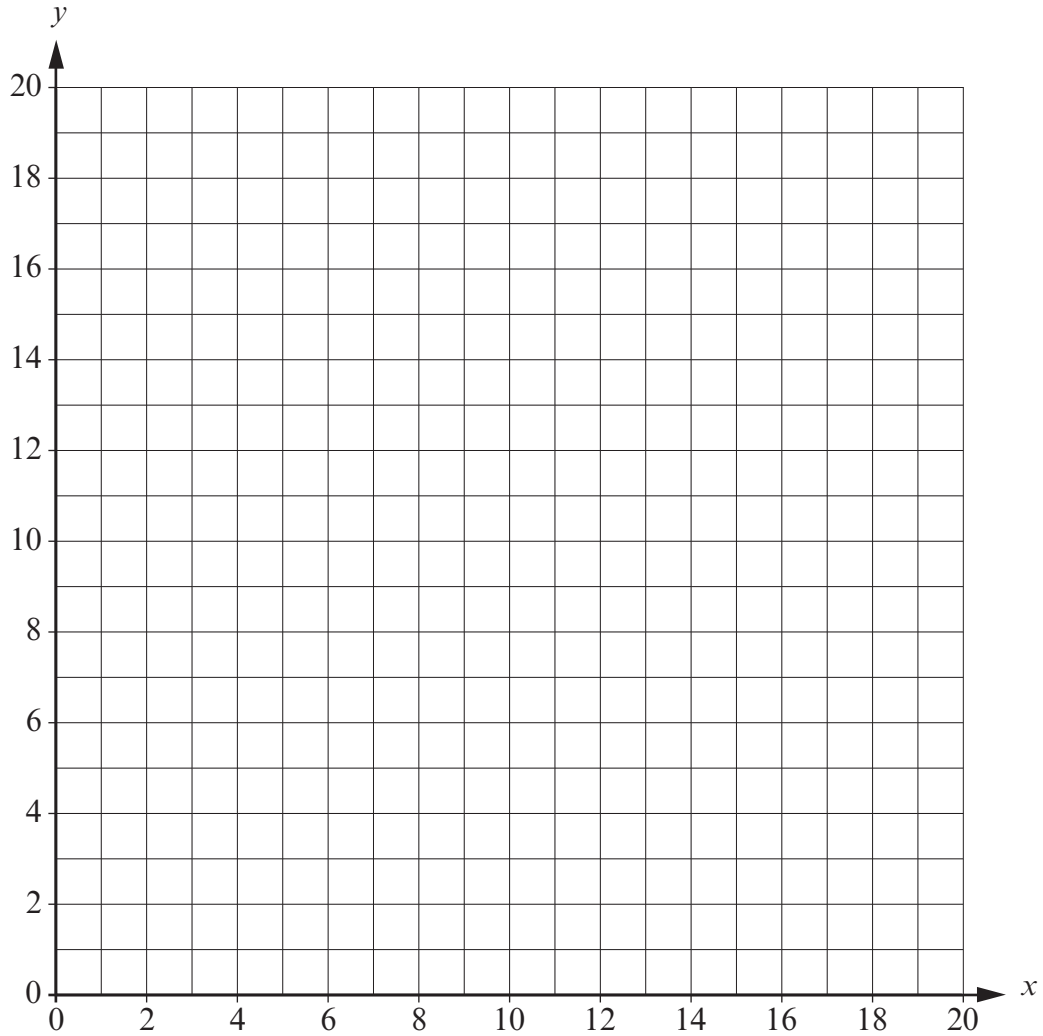


Give the coordinates of a possible fourth point that could be plotted on the grid in order to make a kite when all four points are joined together.

(.....,))

[2]

1. Three vertices of a parallelogram are at $(6, 18)$, $(3, 2)$, and $(14, 2)$. Find the coordinates of the fourth vertex of the parallelogram, which lies on the grid shown below.

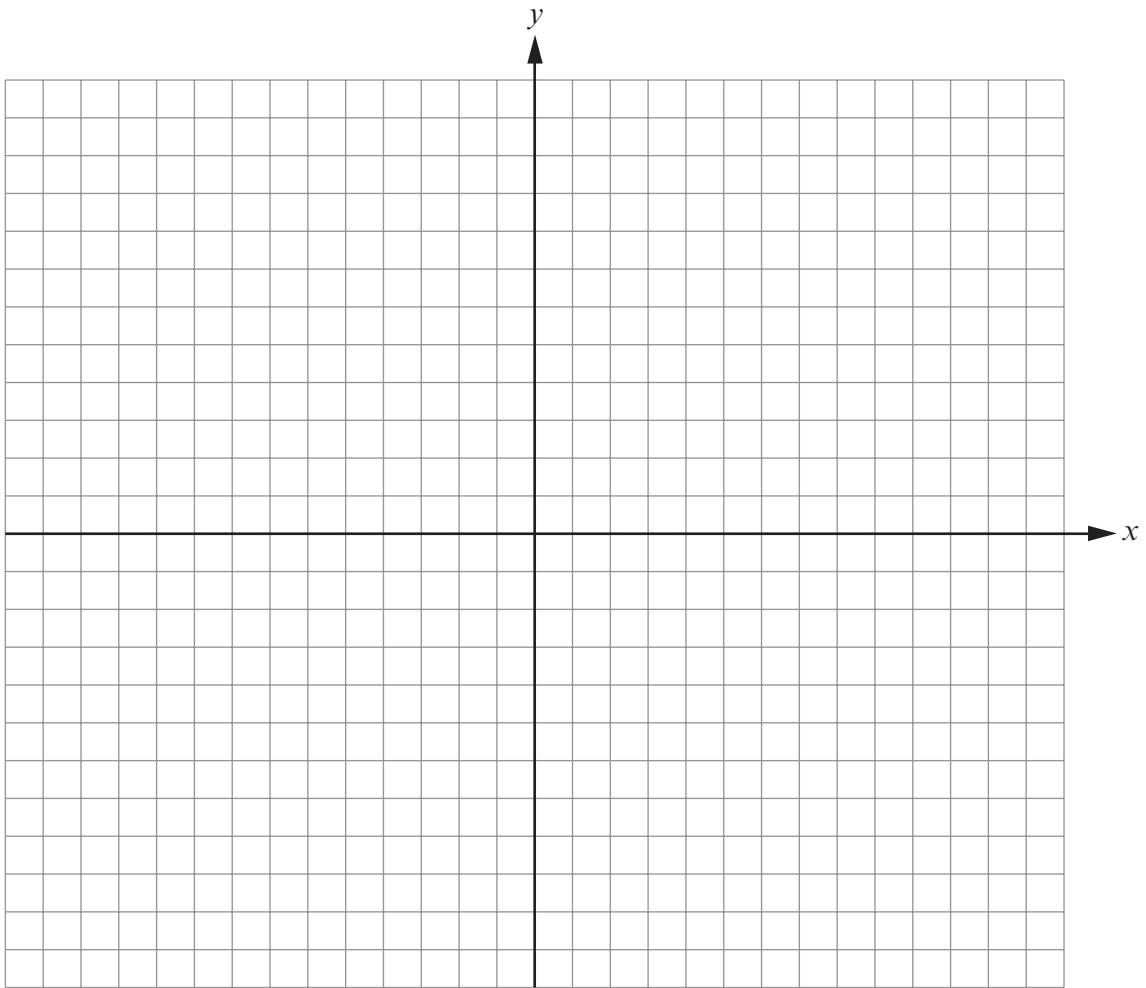


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Co-ordinates of the 4th vertex (..... ,)

[2]

2. The coordinates of three vertices of a parallelogram are $(5, -2)$, $(-3, -2)$ and $(-2, -6)$.



- (a) Find the coordinates of a fourth vertex of the parallelogram.

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 (..... ,)

[2]

- (b) Find the coordinates of the mid point of a diagonal of your parallelogram.

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 (..... ,)

[2]

4. (a) You are given the coordinates of three of the four vertices of a parallelogram.
They are $(3, 2)$ $(5, -2)$ $(7, 2)$.
Find the coordinates of two possible positions for the fourth vertex.

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Coordinates of one of the possible answers $(\dots\dots\dots, \dots\dots\dots)$

Coordinates of another possible answer $(\dots\dots\dots, \dots\dots\dots)$

[4]

(b) Find the coordinates of the midpoint of the straight line which joins $(2, -4)$ and $(-2, 6)$.

[2]

Examiner
only

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(..... ,)