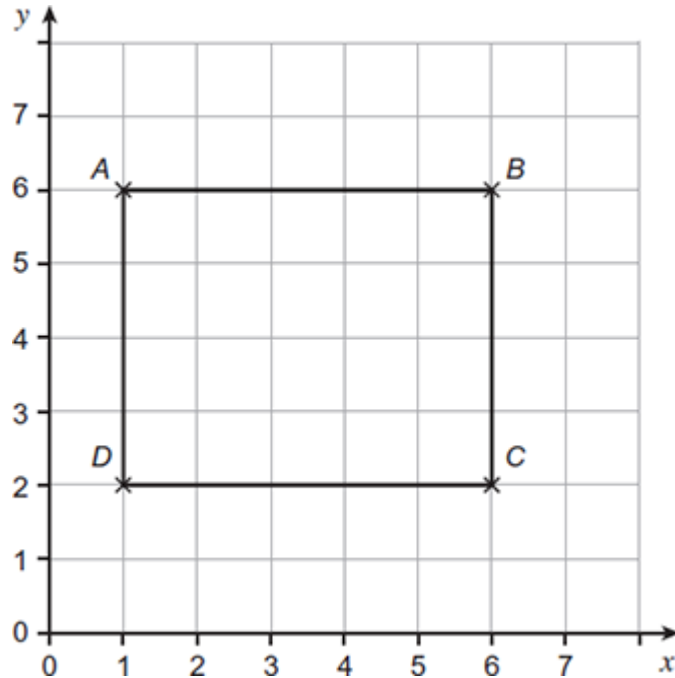### Non-Calculator

Q1.

$ABCD$ is a rectangle on a centimetre grid.

(a)   Write down the coordinates of A.

Answer (_____, _____)

(1)

(b)   Mark the midpoint of BC with a cross.

(1)

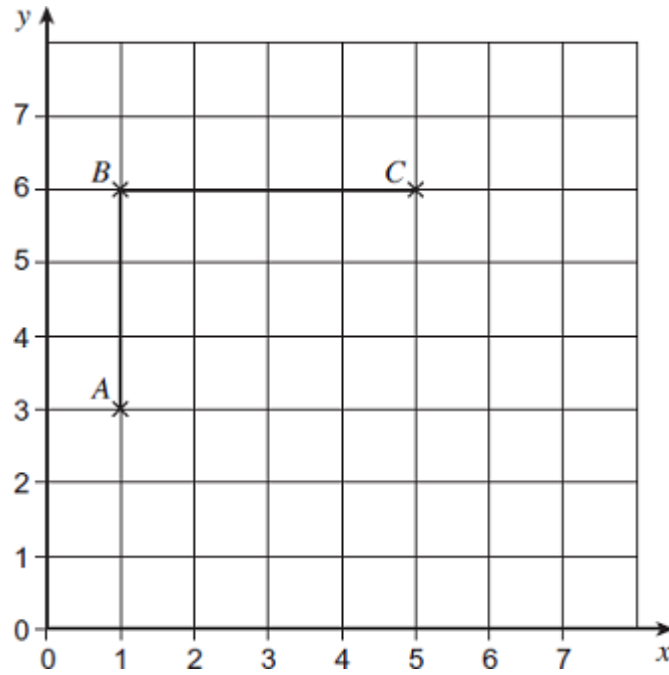(c)   Work out the perimeter of the rectangle.

_____

Answer _____ cm

(2)

(Total 4 marks)

Q2.

Lines AB and BC are shown on the centimetre grid.

(a)   Write down the coordinates of point A.

Answer   (_____ , _____)

(1)

(b) A, B and C are three corners of a rectangle $ABCD$.

Complete the rectangle on the grid.
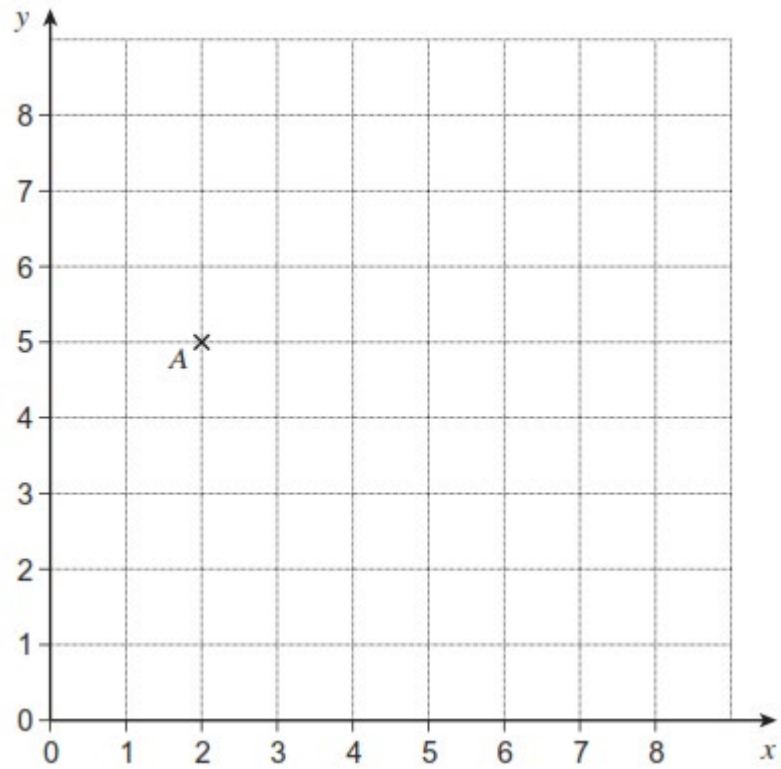
(1)

(c)   Work out the perimeter of rectangle $ABCD$.

_____

_____

_____

Answer _____ cm

(2)

(Total 4 marks)

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Q3.

Point *A* is shown on the grid.

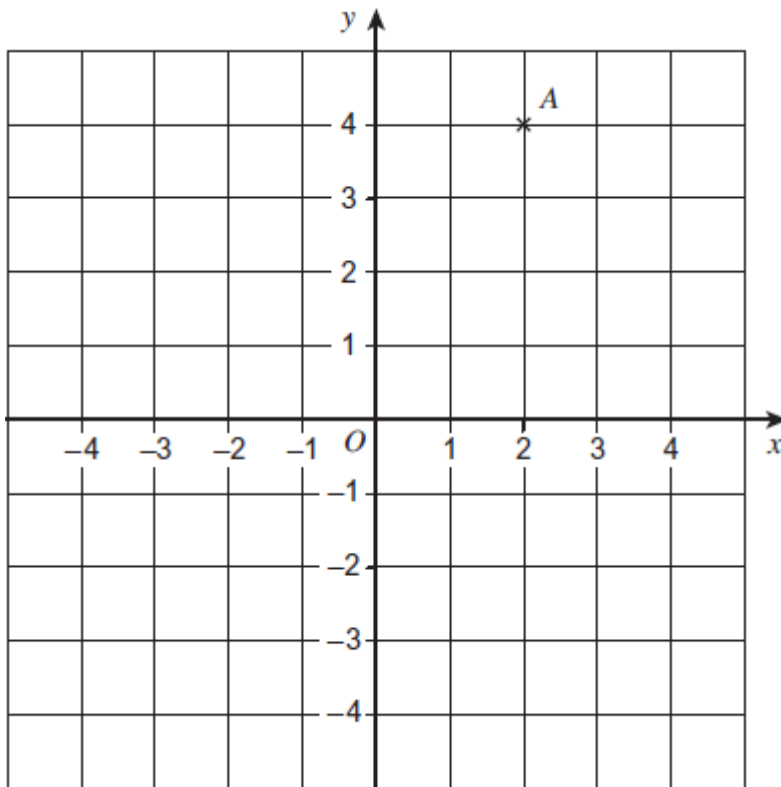(a) Write down the coordinates of A.

Answer (_____ , _____)

(1)

(b) Plot point B (8,1) on the grid.

(1)

(c) Work out the coordinates of the midpoint of AB.

Answer (_____ , _____)

(2)

(Total 4 marks)

Q4.

(a)   Write down the coordinates of point *A*.

Answer   (_____ , _____)

(1)

(b)   Plot the point (–3, –1) on the grid.
        Label it *B*.

(1)

(c)   Point *C* has
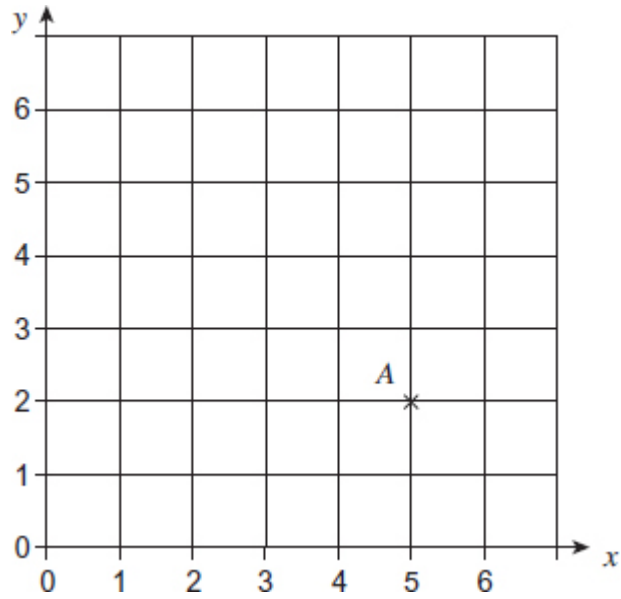   •   the same *x*-coordinate as point *A*
   •   the same *y*-coordinate as point *B*.

Write down the coordinates of point *C*.

Answer   (_____ , _____)

(1)
(Total 3 marks)

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Q5.

Point *A* is shown on the grid.

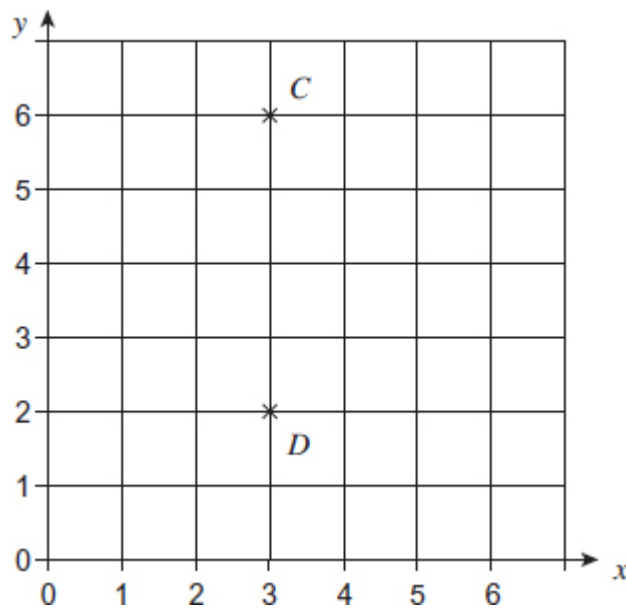(a)   Write down the coordinates of *A*.

Answer (_____ , _____)

(1)

(b)   Plot point *B* (1, 2) on the grid.

(1)

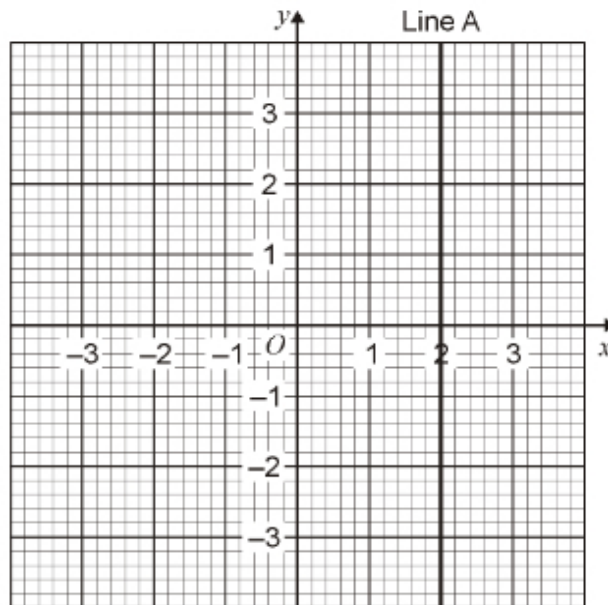(c)   Point *E* is the same distance from point *C* as it is from point *D* on the grid below.

Write down **two** possible pairs of coordinates of *E*.

Answer (_____ , _____) and (_____ , _____)

(2)

(Total 4 marks)

Q6.

Line A

(a)   Circle the equation of line *A*.

$y = 2$ $x = 2$ $x + y = 2$ $y = x + 2$

(1)

(b)   On the grid draw the line $y = x$

(1)

(c)   Write down the coordinates of the point where the line $y = x$ crosses line *A*.
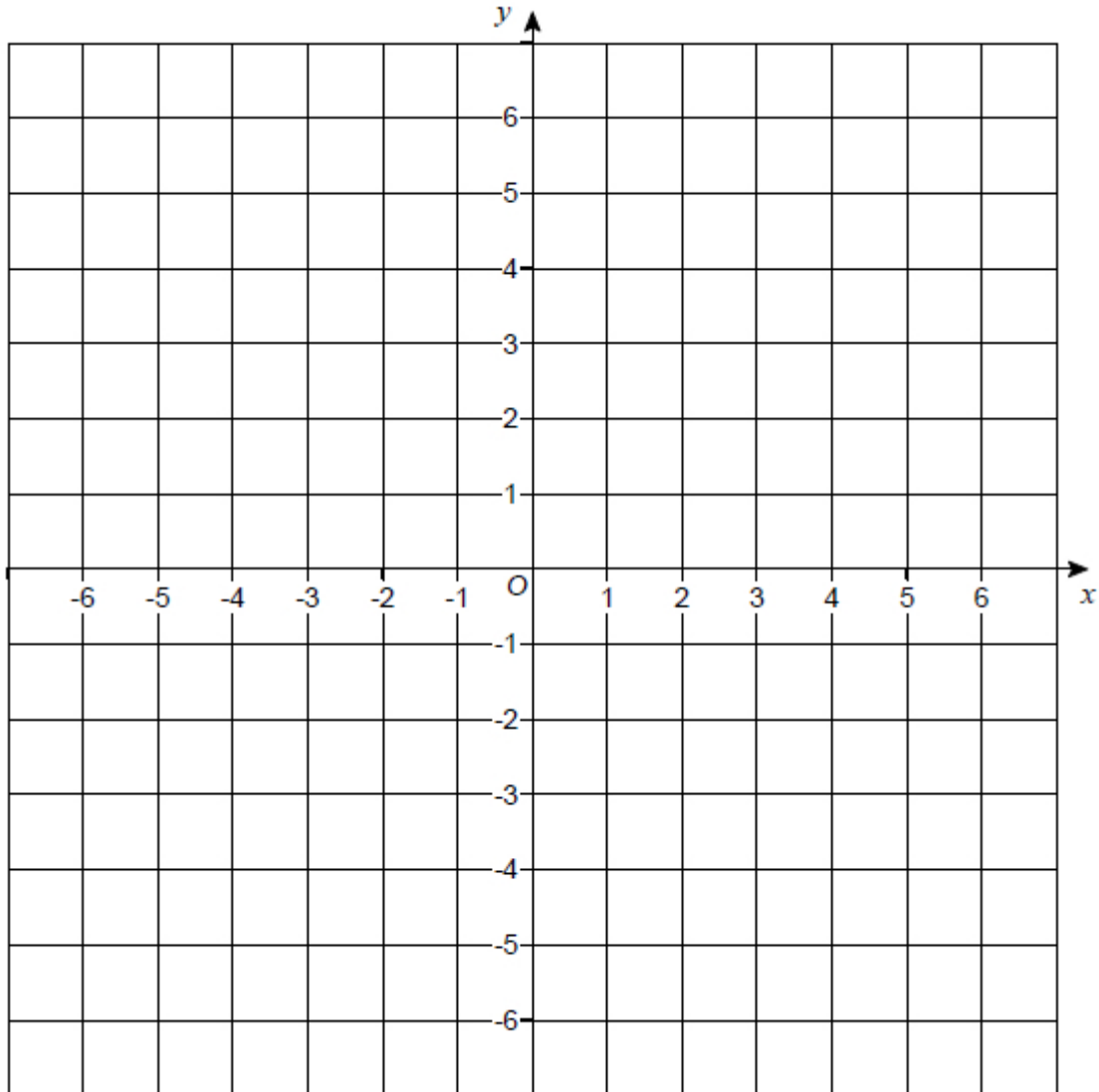
Answer   (_____ , _____)

(1)

(Total 3 marks)

Q7.

A straight line passes through the points (−1, 2) and (1, 6)

Another straight line has equation $y = x$

Work out the coordinates of the point of intersection of the two lines.
You may use the grid to help you.

_____

_____

_____

_____

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

(Total 4 marks)

Q8.

On the grid, draw the graph of $x + y = 2$ for values of x from −3 to 3

(Total 2 marks)

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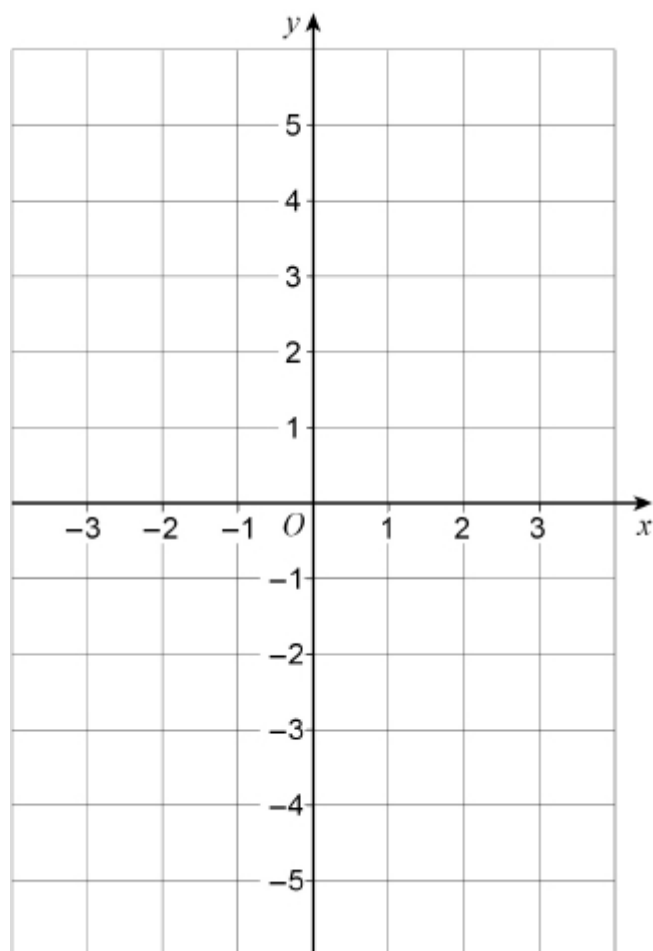
Calculator

Q9.

(a)   Complete the table for $y = 3x + 1$

x	−3	−2	−1	0	1	2	3
y	−8		−2		4		

(2)

(b)   On the grid draw the graph of $y = 3x + 1$ for values of x from −3 to 3
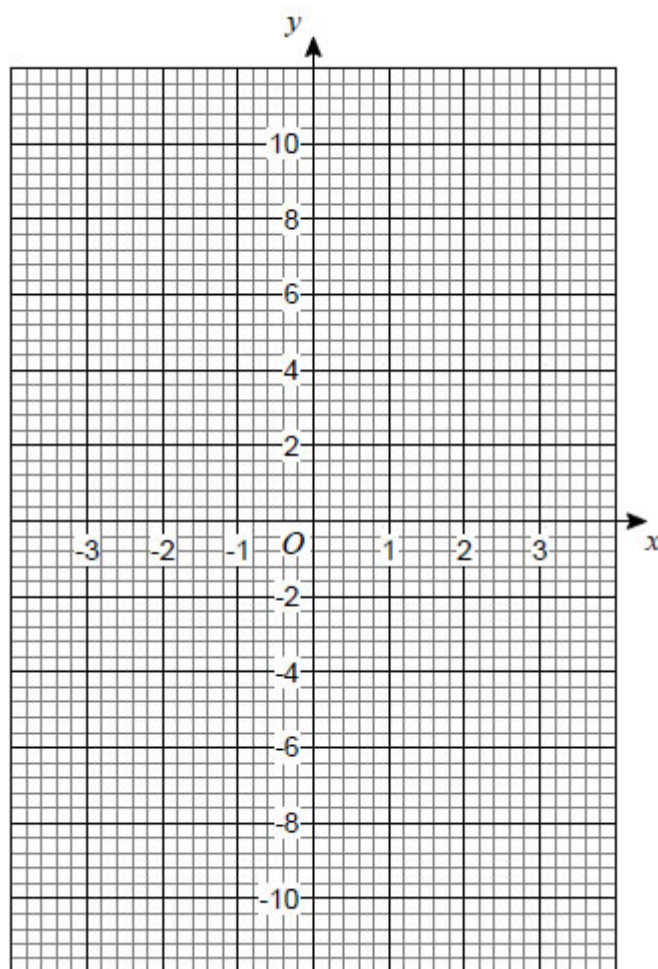
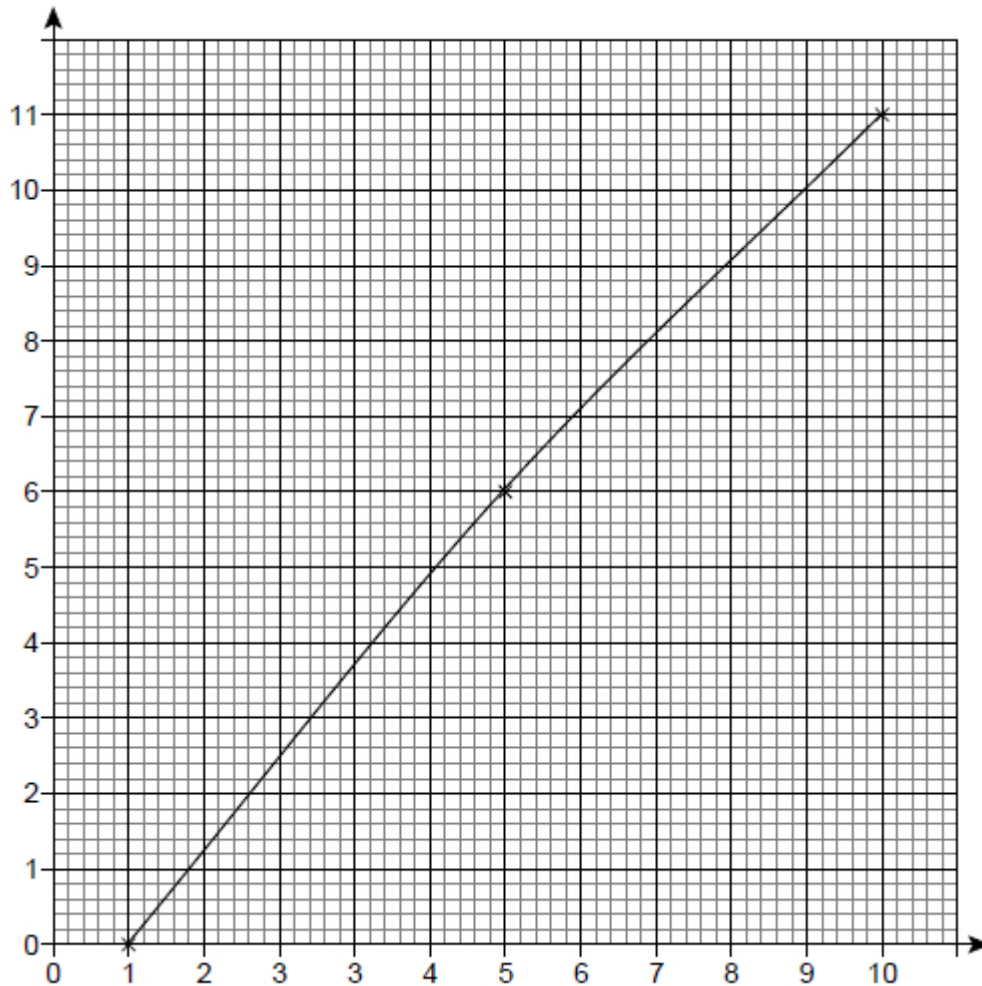

(2)

(c)   Solve $x = 3x + 1$

$x =$ _____

(2)

(Total 6 marks)

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Q10.

Guy is using this table of results to draw the graph of $y = x + 1$ for values of x from 0 to 10

x	0	5	10
y	1	6	11

This is his graph.

Write down **three** different mistakes he has made.
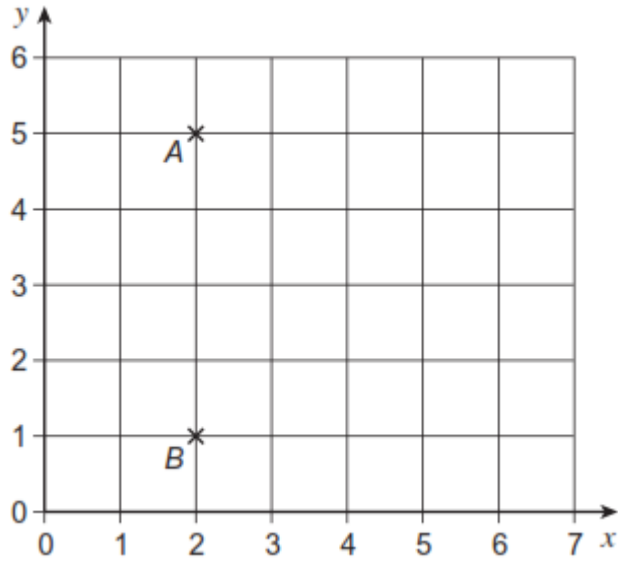
Mistake 1 _____

Mistake 2 _____

Mistake 3 _____

(Total 3 marks)

Q11.

Points *A* and *B* are shown on the grid.

(a)   Write down the coordinates of *A*.

Answer   (_____ , _____)

(1)

(b)   Plot point *C* (6, 1) on the grid.

(1)

(c)   *ABCD* is a square.

Write down the coordinates of *D*.

Answer   (_____ , _____)

(1)

(d)   Write down the coordinates of the centre of the square.

Answer   (_____ , _____)

(1)

(Total 4 marks)

Q12.

A is the point with coordinates $(x, 2y)$.
B is the point with coordinates $(3x, 4y)$.
The midpoint of AB has coordinates $(-4, 15)$.

Work out the values of x and y.

_____

_____

_____

_____

_____

_____

_____

$x =$ _____

$y =$ _____

(Total 4 marks)

Q13.

(a)   Complete the table for $y = 3x - 1$

x	−3	−2	−1	0	1	2	3
y	−10		−4	−1	2		8

(2)

(b)   On the grid draw the graph of $y = 3x - 1$ for values of x from −3 to 3

(2)
(Total 4 marks)

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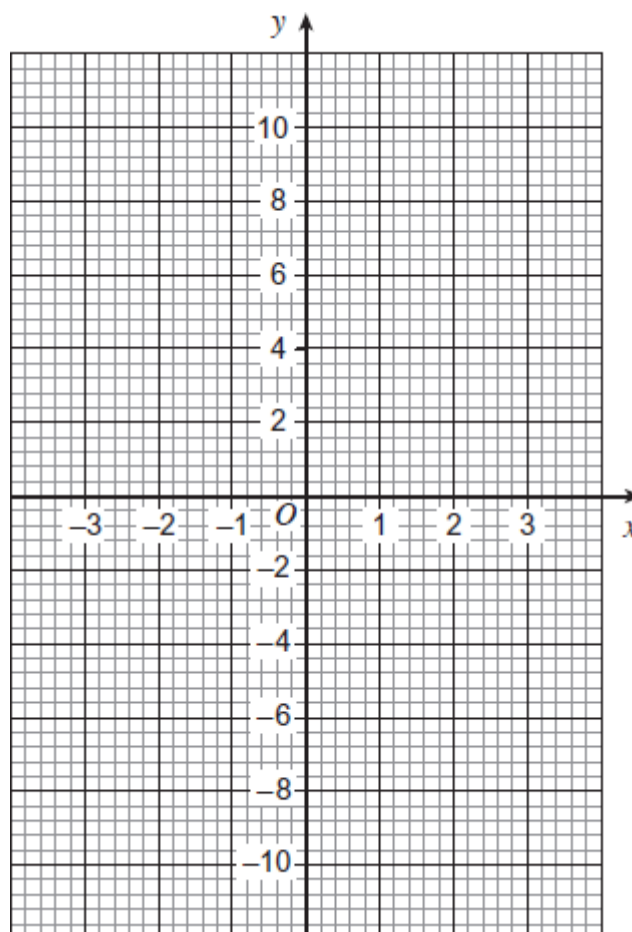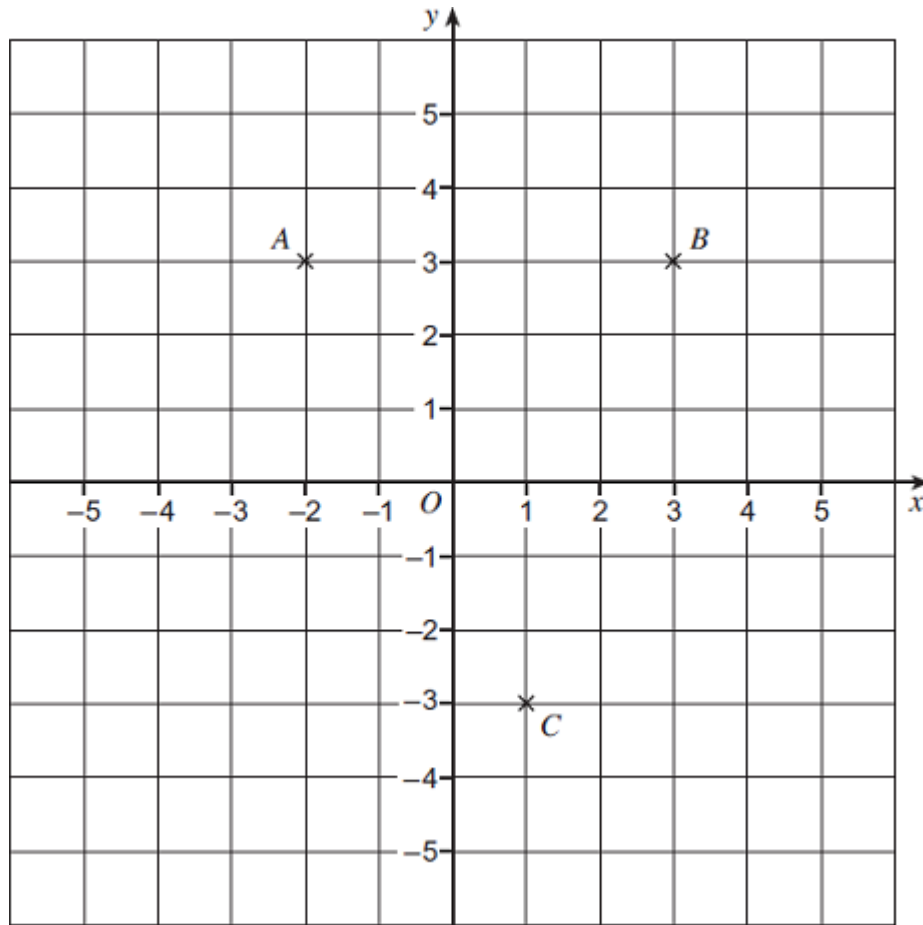
Q14.

Points *A*, *B* and *C* are shown on the centimetre grid.

(a)   Write down the coordinates of *A*.

Answer   (_____ , _____)

(1)

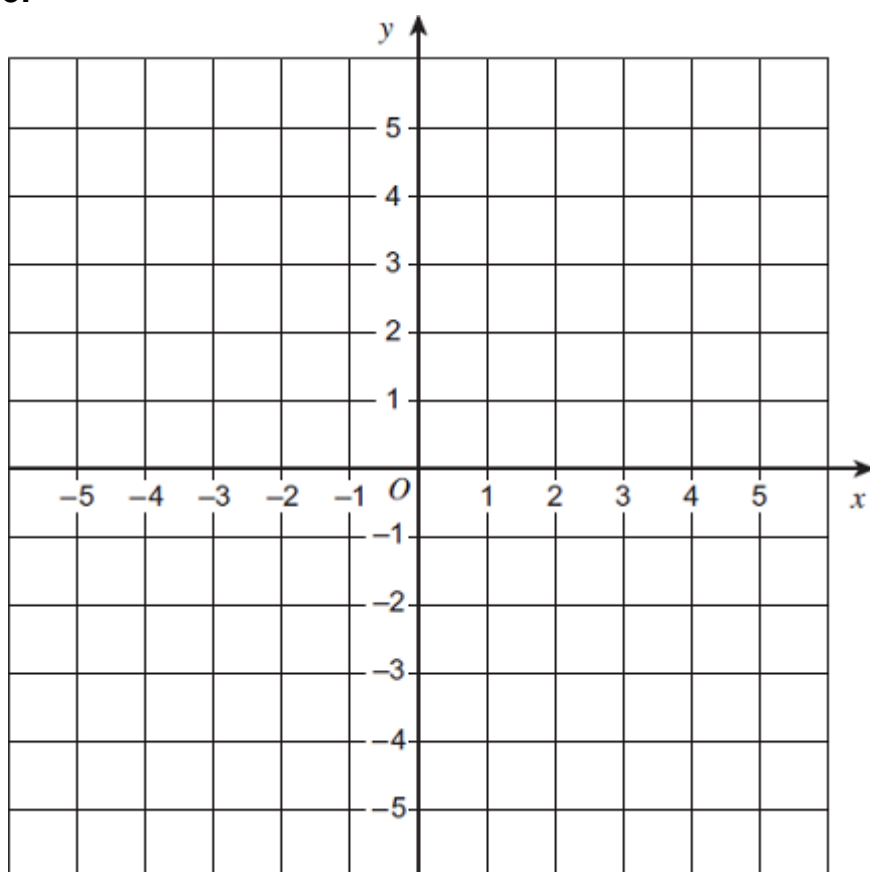(b)   Plot a point *D* so that *ABCD* is a parallelogram.

(1)

(c)   Write down the coordinates of *D*.

Answer   (_____ , _____)

(1)

(Total 3 marks)

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Q15.

(a)   Plot the points *A* (4, 3) and *B* (1, −5) on the grid.

(2)

(b)   Point *C* has

> the same *x*-coordinate as *B*
> the same *y*-coordinate as *A*.

Plot the point *C* on the grid.

(1)

(c)   Point *D* has

> the same *x*-coordinate as the *y*-coordinate of *B*
> the same *y*-coordinate as the *x*-coordinate of *A*.

Plot the point *D* on the grid.

(2)
(Total 5 marks)

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