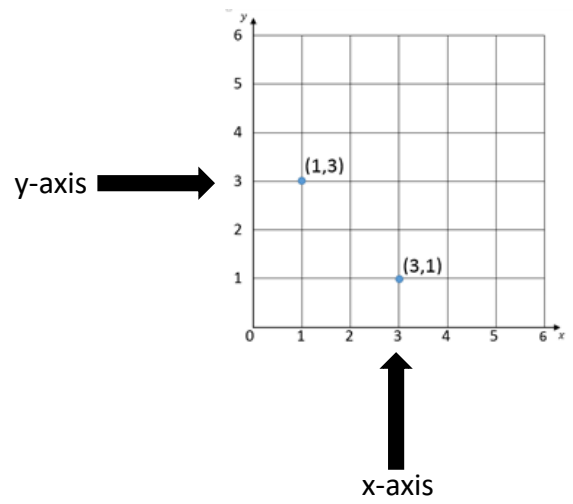


Key Vocabulary
x-axis
y-axis
quadrant
positive
negative
translation
mirror line
plot
coordinates
translate
reflect
end point
direction
horizontal
vertical

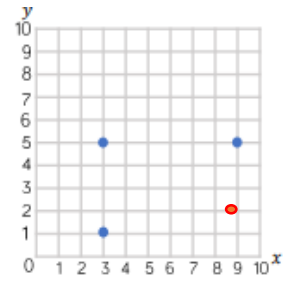
The first quadrant

A **co-ordinate** is a pair/group of numbers used to indicate the position of a point or line.



Tommy is drawing a rectangle on a grid. Plot the final vertex of the rectangle. Write the coordinate of the final vertex.

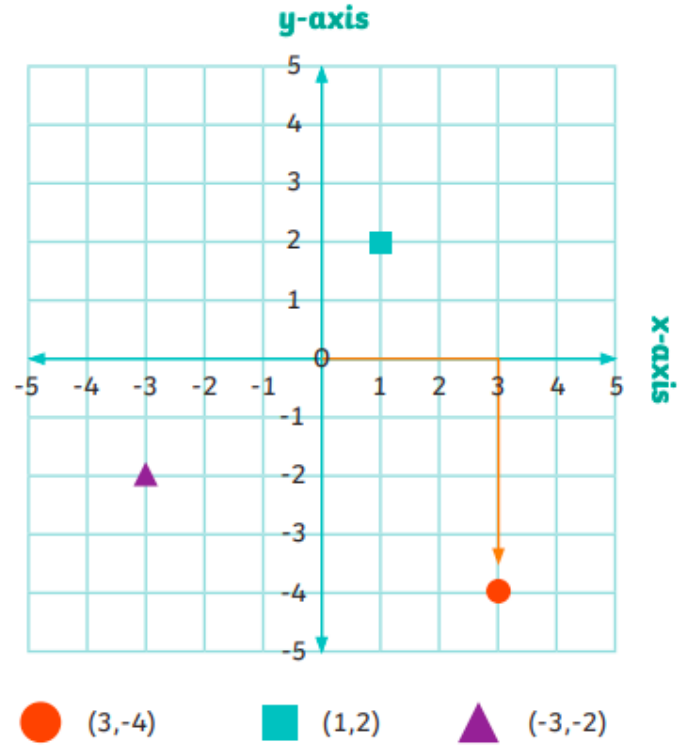
Answer: (9, 1)



A **vertex** is a corner or point where two lines meet.

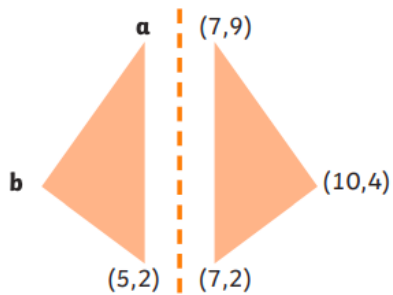
Four quadrants

Coordinates can use **positive** and **negative** numbers. Whether positive or negative, the **x-axis** is written first, followed by the **y-axis** coordinate.



The circle is 3 units along the x-axis and 4 units down the y-axis. Its coordinates are (3,-4). A tip to remember the order of the coordinates is 'along the corridor and up the stairs.'

Missing coordinates



Shapes can be shown on unmarked grids.

Point a is in the same position along the x-axis as (5,2) and in the same position on the y-axis as (7,9).

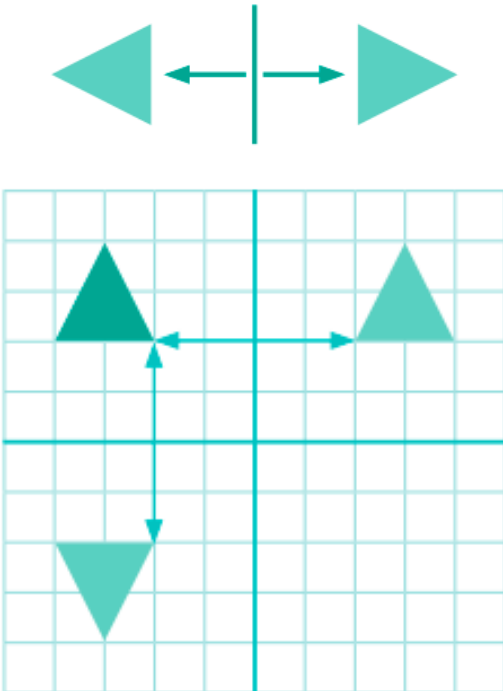
Point a's position is (5,9)

Point b is in the same position on the y-axis as (10,4). Both triangles will have the same width. The width of the right-hand triangle is 3. This means that the width of the left-hand triangle is also 3.

Point b's position is (2,4)

Reflect shapes

A shape is reflected when it is flipped over a line which acts as a mirror. Every point on the original shape is the same distance from the mirror line as the same point on the reflected shape. The original triangle has been reflected in the x-axis and the y-axis.



Translate shapes

A shape is translated when it is moved without being rotated or resized. Every point of the shape moves the same distance and in the same direction.

Shape 1 has been translated 4 units left and 3 units down.

