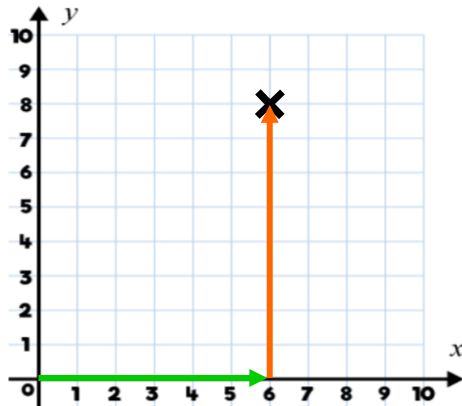


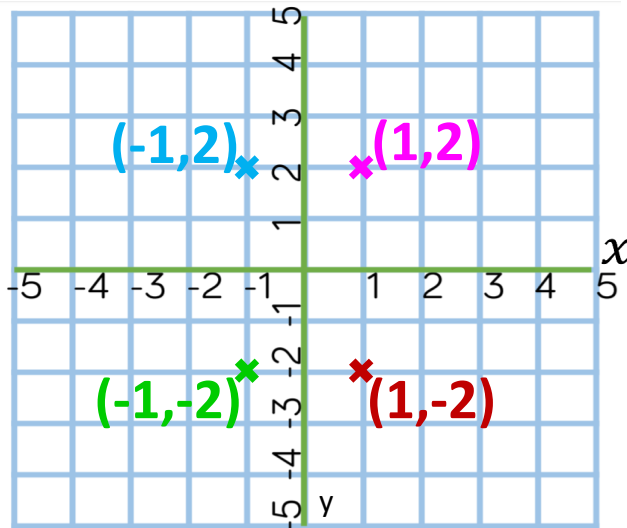
Plotting in the first quadrant

(6,8)



When plotting co-ordinates, the **first co-ordinate** represents moving in the **x-direction** and the **second co-ordinate** represents moving in the **y-direction**.

All four quadrants



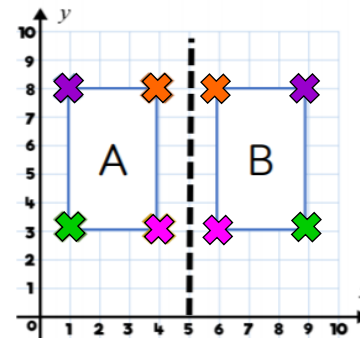
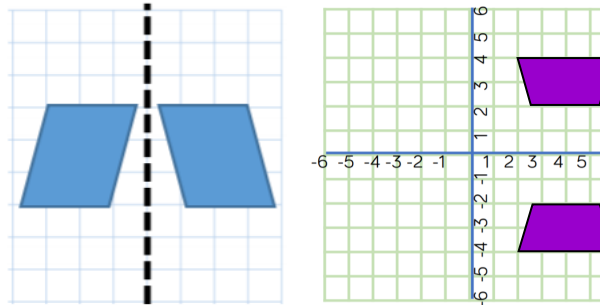
With four quadrants, co-ordinates can be in a positive and negative direction

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Position and direction

Reflections

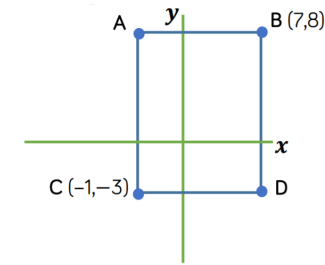
Reflections are where a shape or co-ordinates are mirrored across a line.



As you can see in the above example, the co-ordinates closest to the line of reflection in shape A are still the closest after being reflected.

$(4,3) \rightarrow (6,3)$ / $(4,8) \rightarrow (6,8)$
 $(1,3) \rightarrow (9,3)$ / $(1,8) \rightarrow (9,8)$

Properties of shapes

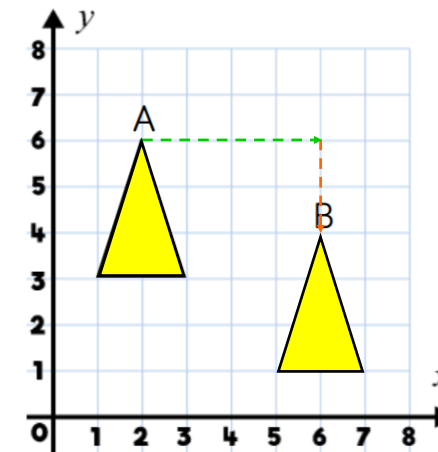


A will have the same **x co-ordinate** as C.
 A will have the same **y co-ordinate** as B.

B = (7,8) A = (-1,8)
 C = (-1,-3)
 D will have the same **x co-ordinate** as B.
 D will have the same **y co-ordinate** as C.
 B = (7,8) D = (7,-3)
 C = (-1,-3)

Translation

Translations are where a shape or co-ordinates are move across the **x-axis** and up or down the **y-axis**.



The yellow triangle has been translated **4 right** and **2 down**.

Vertex A = (2,6)

Vertex B = (6,4)

The **x co-ordinate** has **increased by 4** and the **y co-ordinate** has **decreased by 2**.