Warm your brains up thinking about the following questions:

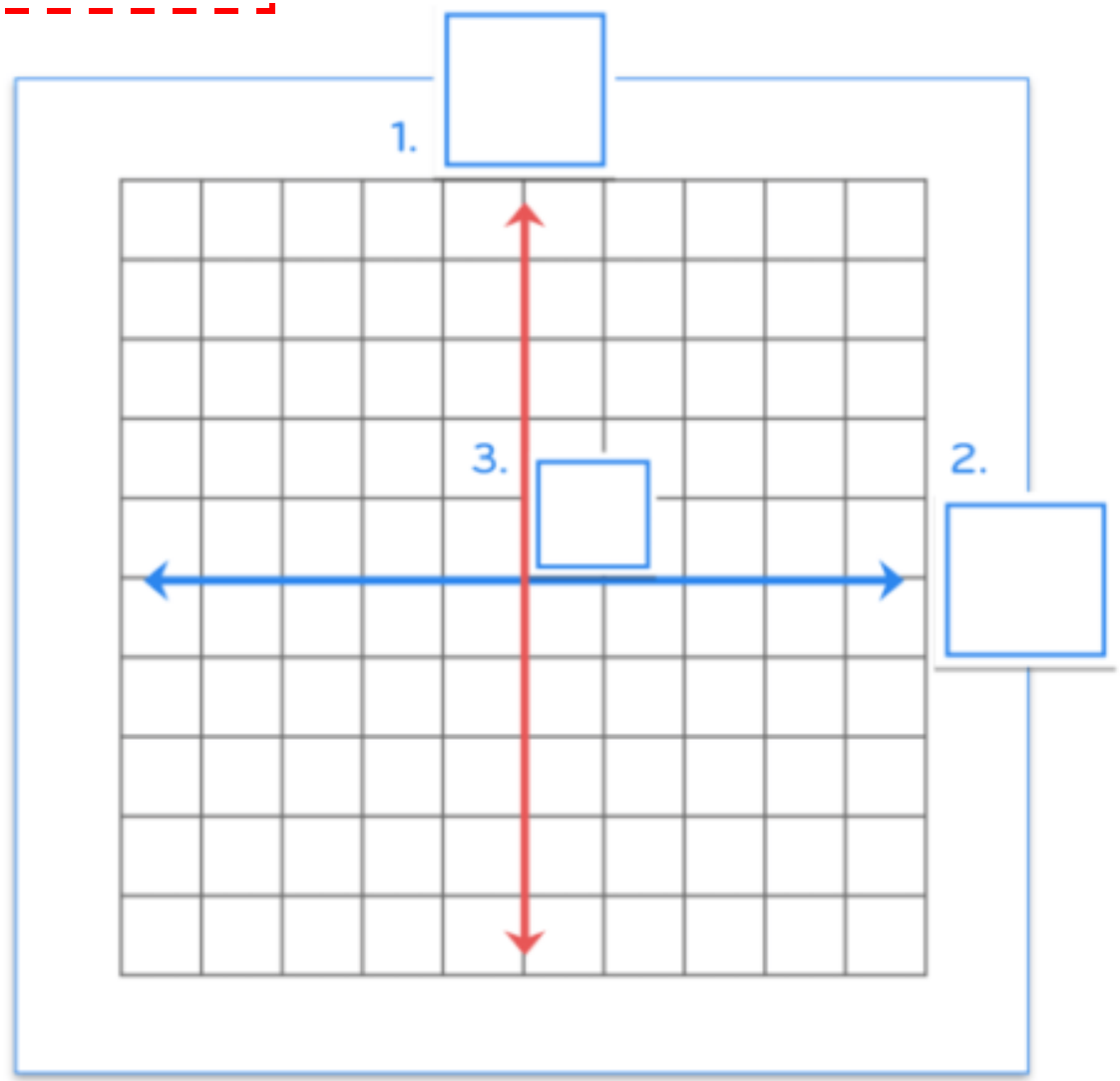
Warm up for coordinates

Name the shapes.

5. How many sides does a hexagon have?
6. What shape has 4 equal length sides with 4 right angles?

Where would you position the ‘x’, ‘y’ and ‘0’ ?

Axes and origin



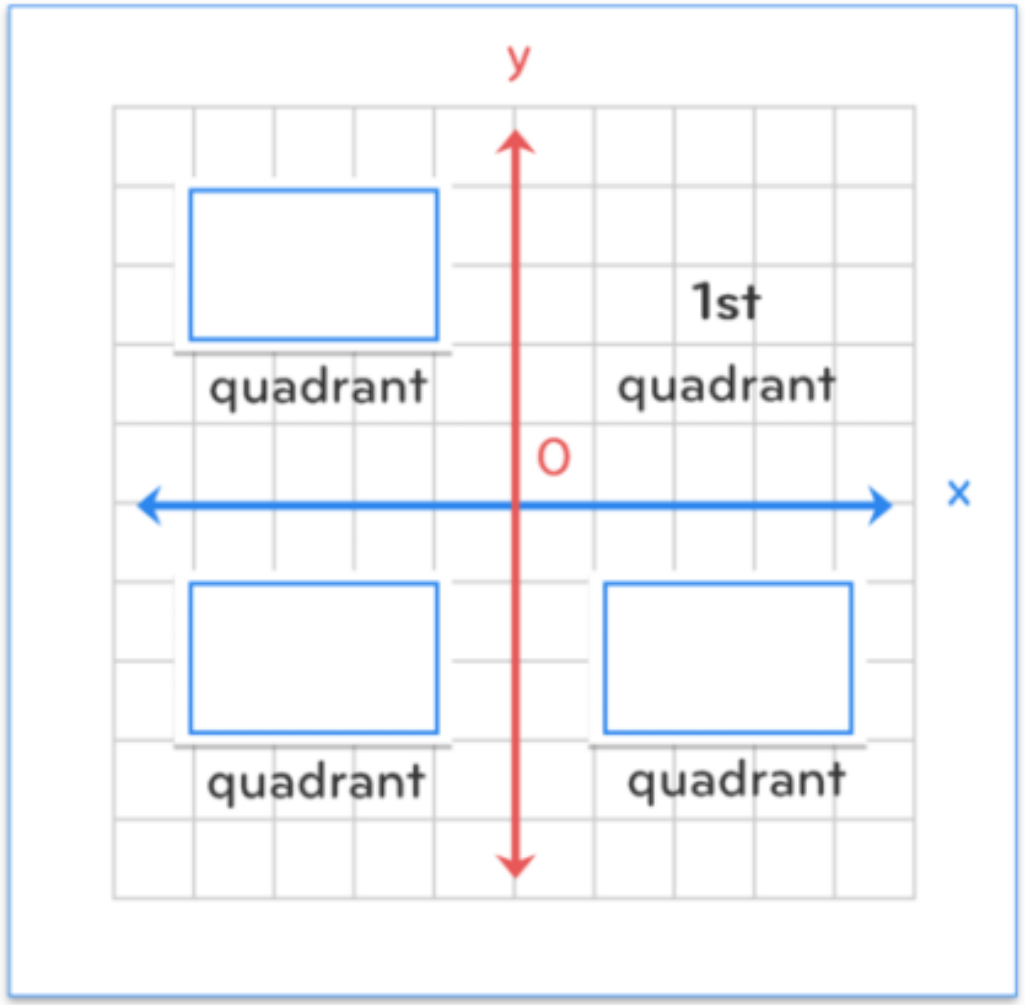
x

y

0

Locate the 2nd, 3rd and 4th quadrant

Grid



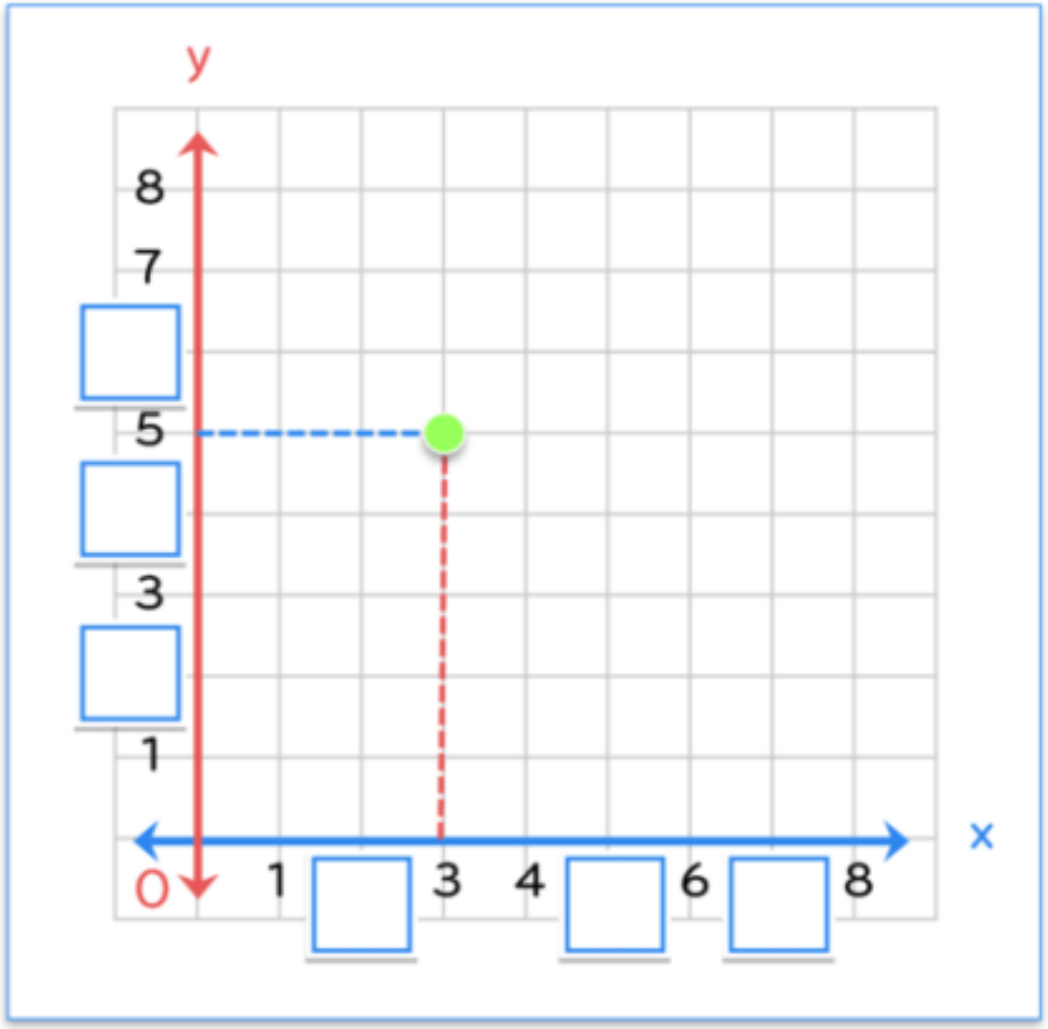
2nd

3rd

4th

What would you write in the blue boxes?

Grid: 1st Quadrant



coordinates of a point.

(x, y)

(□ , □)

Along the corridor and up the stairs

What are the coordinates for the following items?

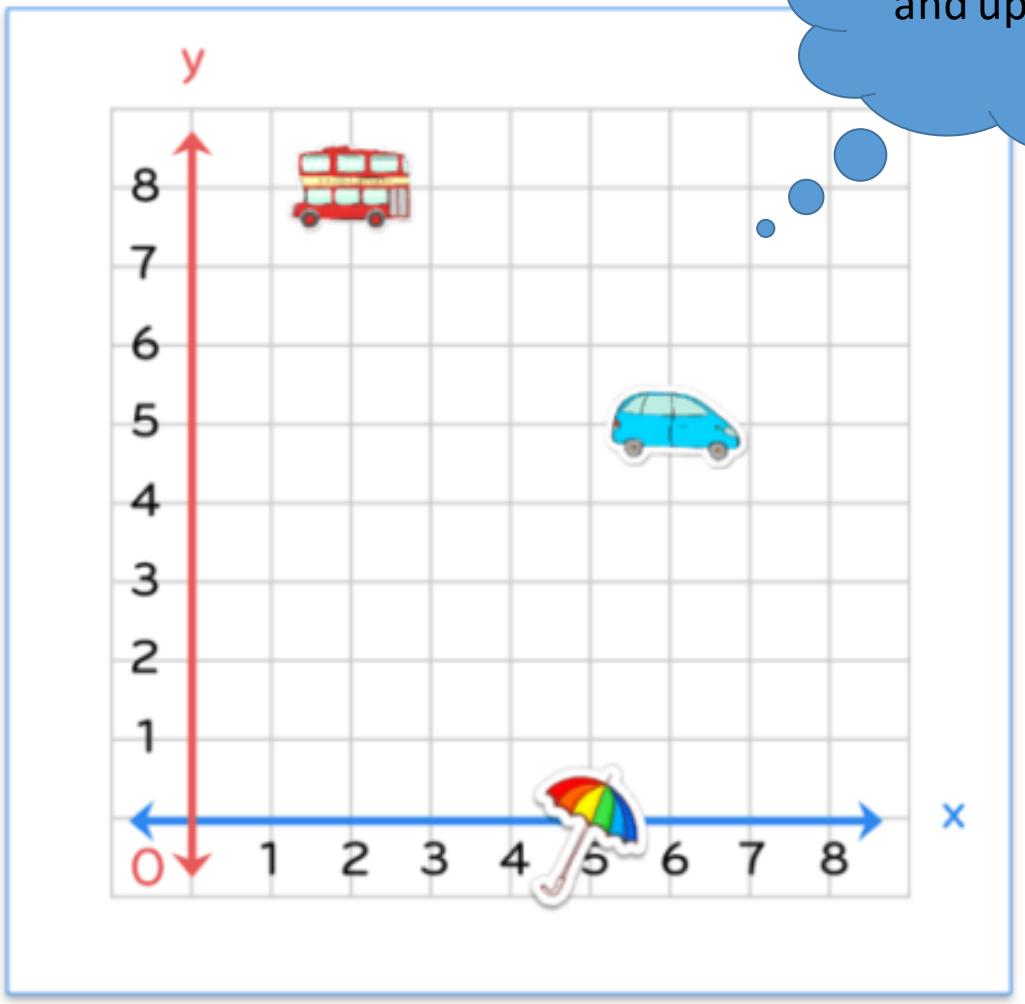
Practice time

Along the corridor and up the stairs

Write the coordinates of the:

1. car (___ , ___)
2. bus (___ , ___)
3. umbrella

(___ , ___)



Now what are the coordinates for the following items?

Practice time

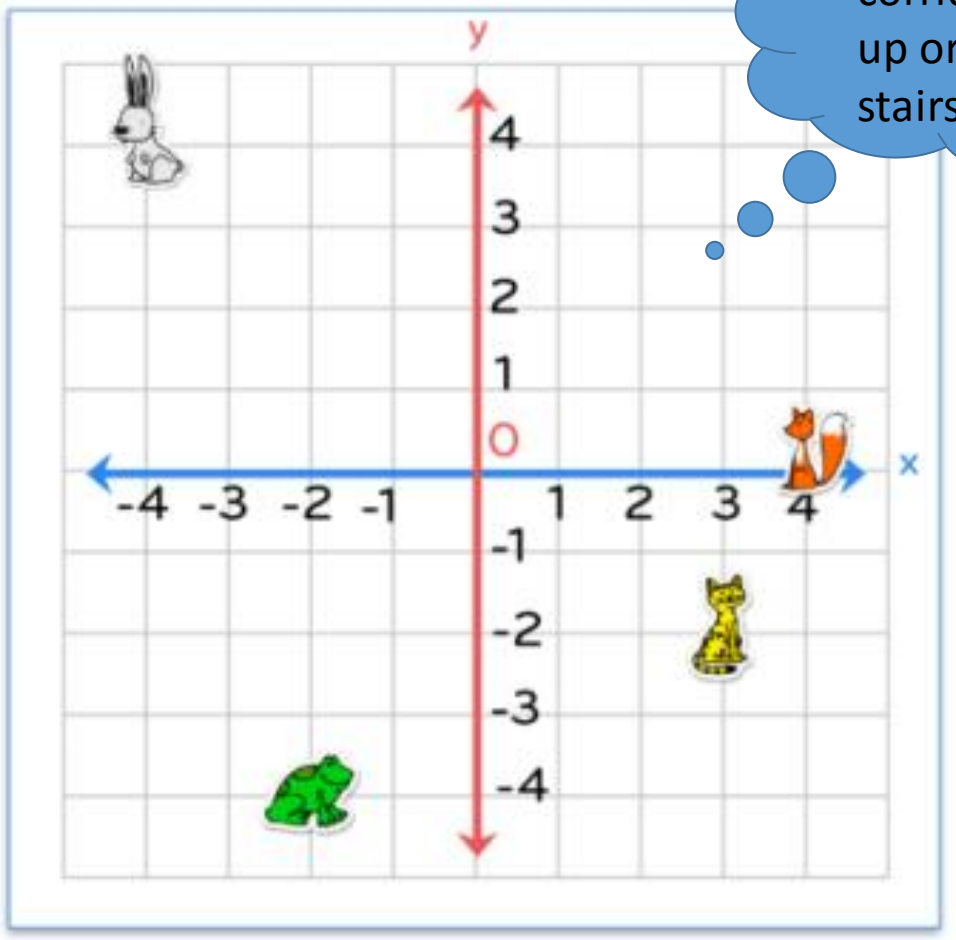
1. Write the coordinates of the:

a) frog (,)

b) rabbit (,)

c) tiger (,)

d) dog (,)



It's still along the corridor *but* then up or down the stairs

Transformations

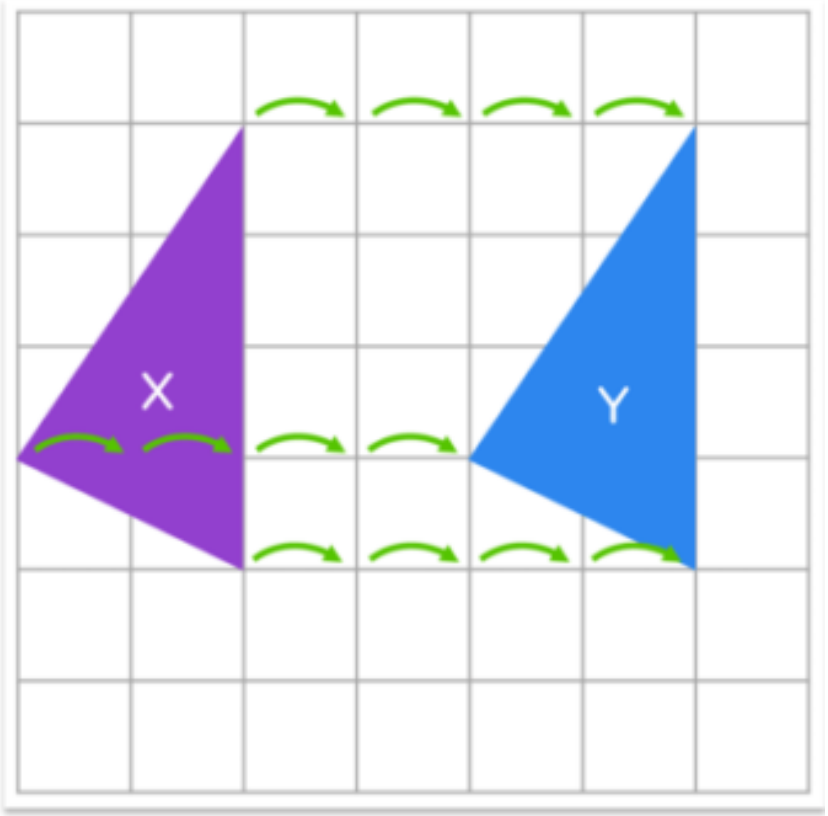
Transformations are ways of changing or moving shapes.

There are different types of transformation, for example,

- Translation
- Reflection
- Rotation

Translation

- A translation is a sliding movement.
- A translation can be to the left or right, up or down, or a combination of these.



Example:

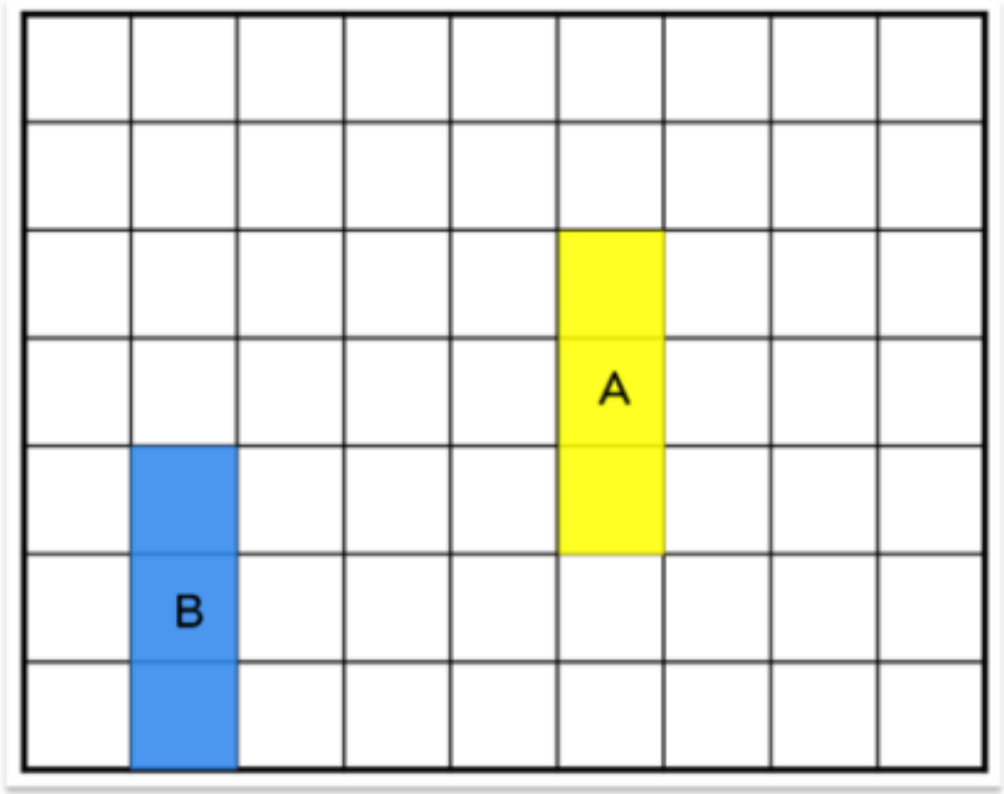
Shape X is translated to position Y.

Each corner has moved ____ units to the ____ to make a new triangle at position Y.

What is missing?

Translation

How would you describe the translation?

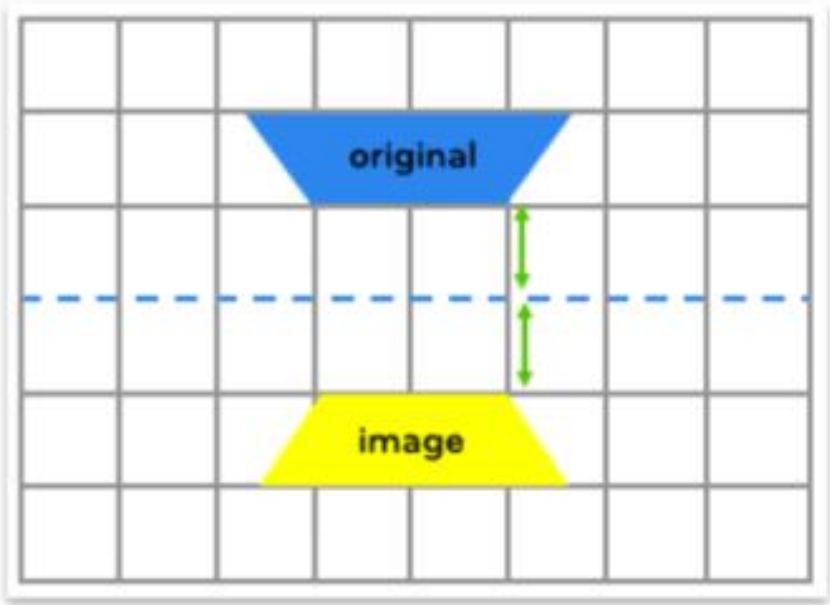


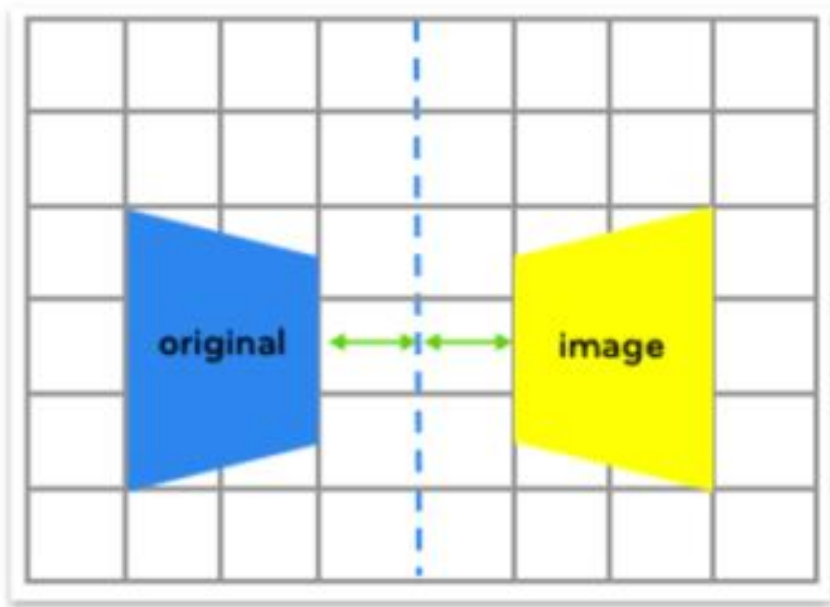
Describe the translation from shape A to position B.

[ ] units to the [ ] [ ]

Reflection

- **Reflection** is a mirror image of any object.
- You 'flip' the object over a line called the **line of reflection**



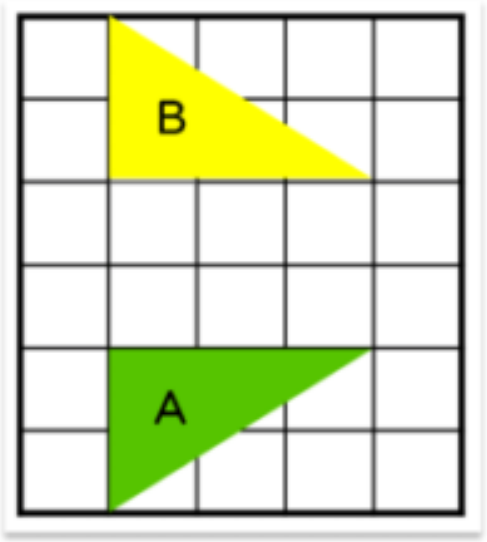


How would you describe the transformations?

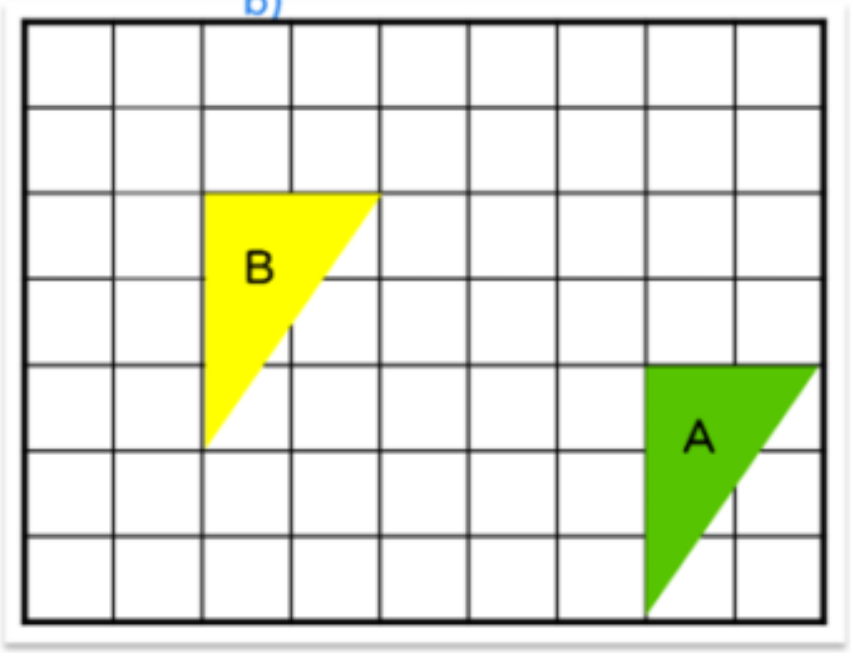
Practice time

1. Describe these transformations from shape A to shape B.
   For translations, give the direction and number of units.
   For reflections, say whether it is a vertical or horizontal reflection.

a)

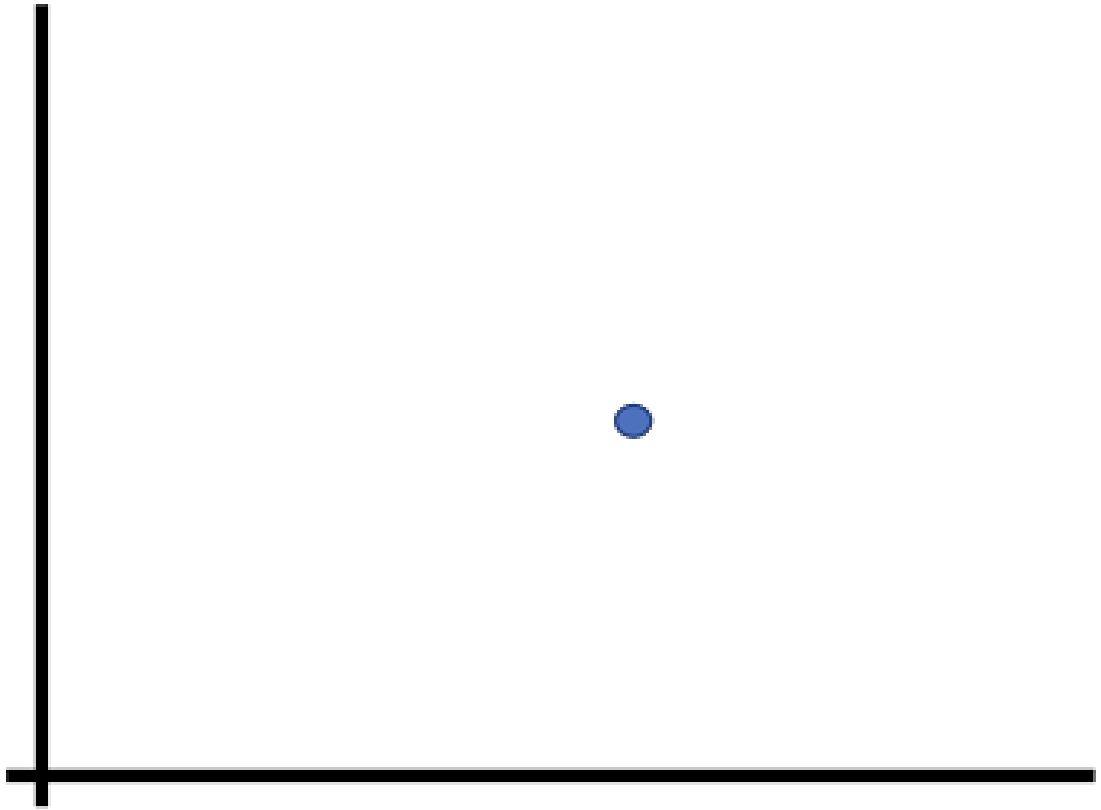


b)



Tickle that brain of yours a little further with the following two mastery questions…

Think of possible coordinates for the blue dot.



Could the coordinates of the blue dot be:

(3,5)

(5,3)

(10,9)

Tickle that brain of yours a little further with the following two mastery questions…

Estimate the coordinates of the red and green dots.