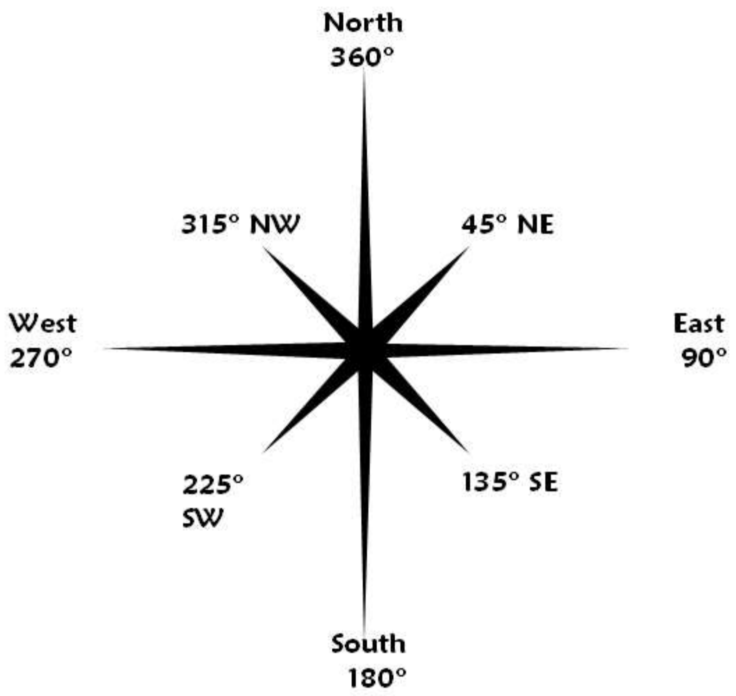
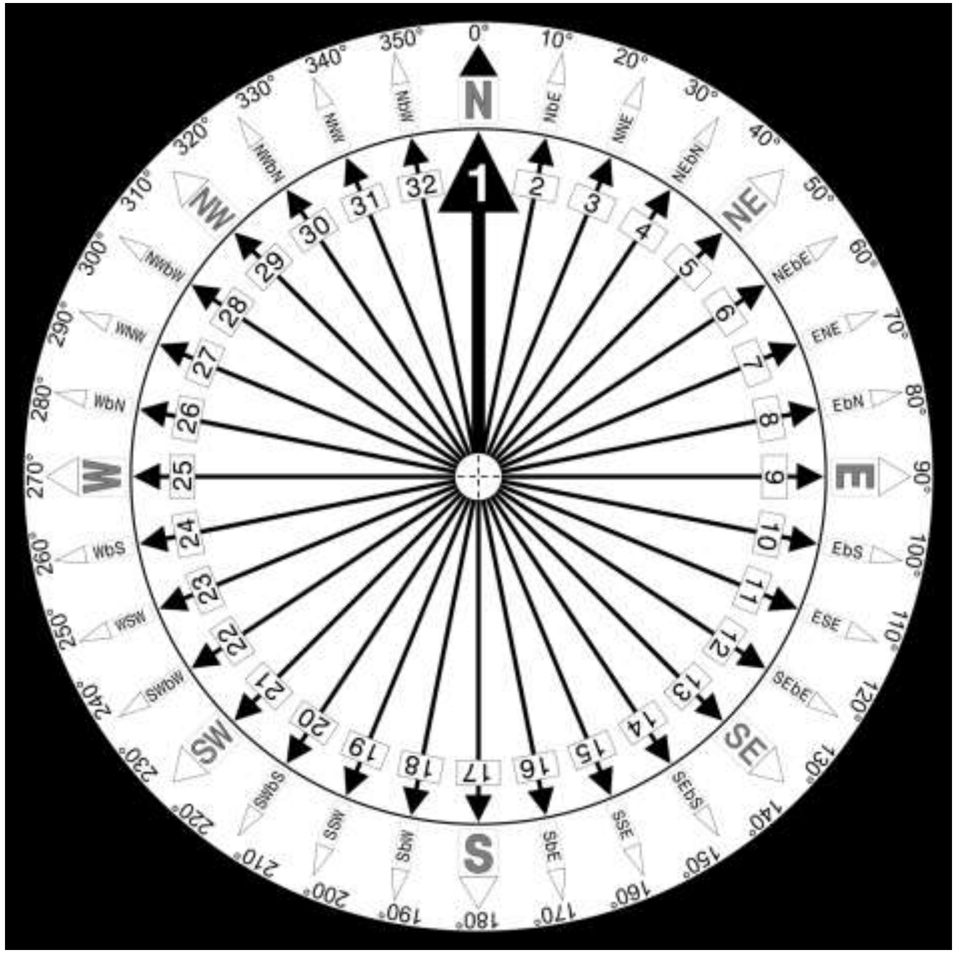
Day One 29.6.20

Draw a maze and write instructions for someone to travel through the maze to reach the centre. Use angles, degrees of turn and points of a compass to help you.
E.g. Take 3 steps N and turn 90 degrees clockwise.

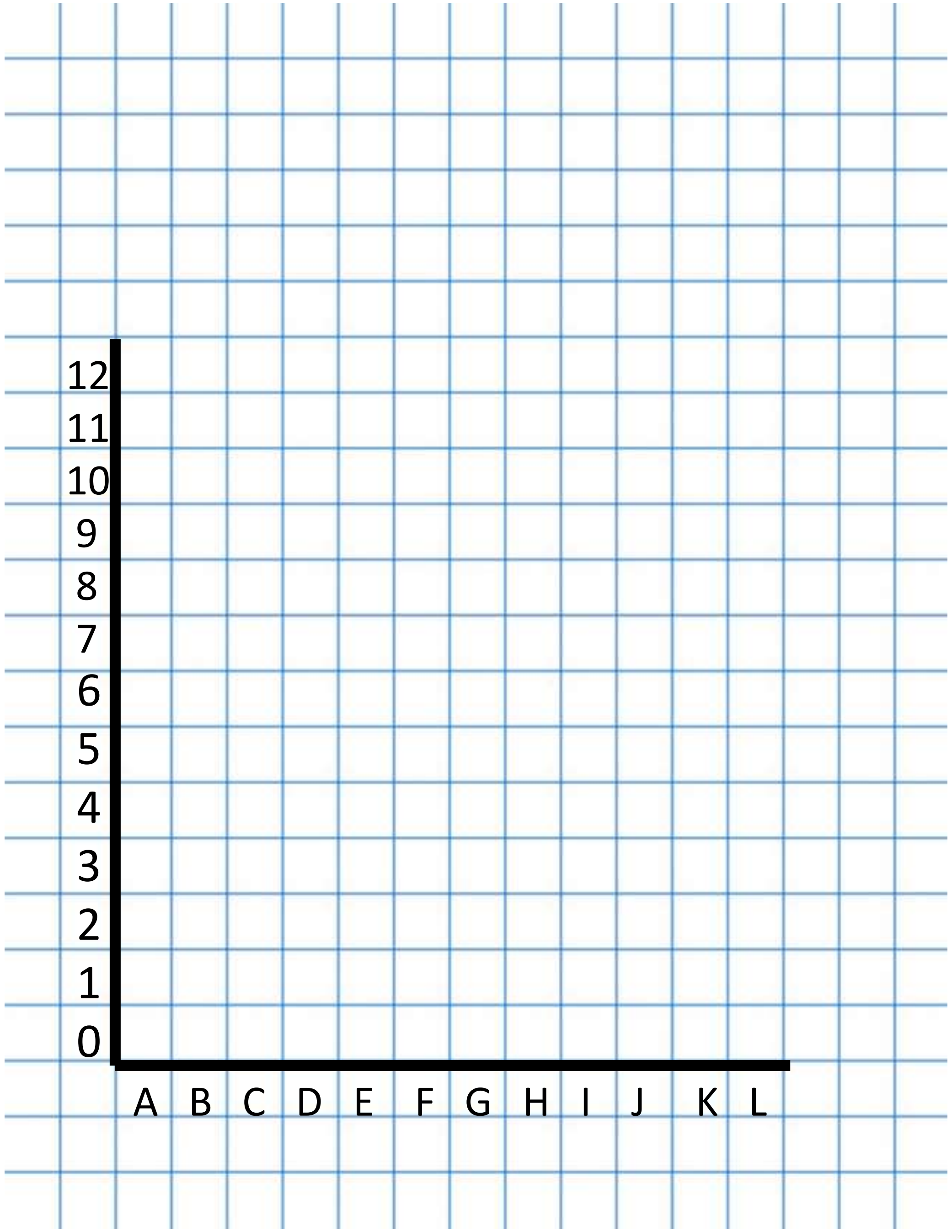




Extn – give directions to get back out!

Day Two 30.6.20

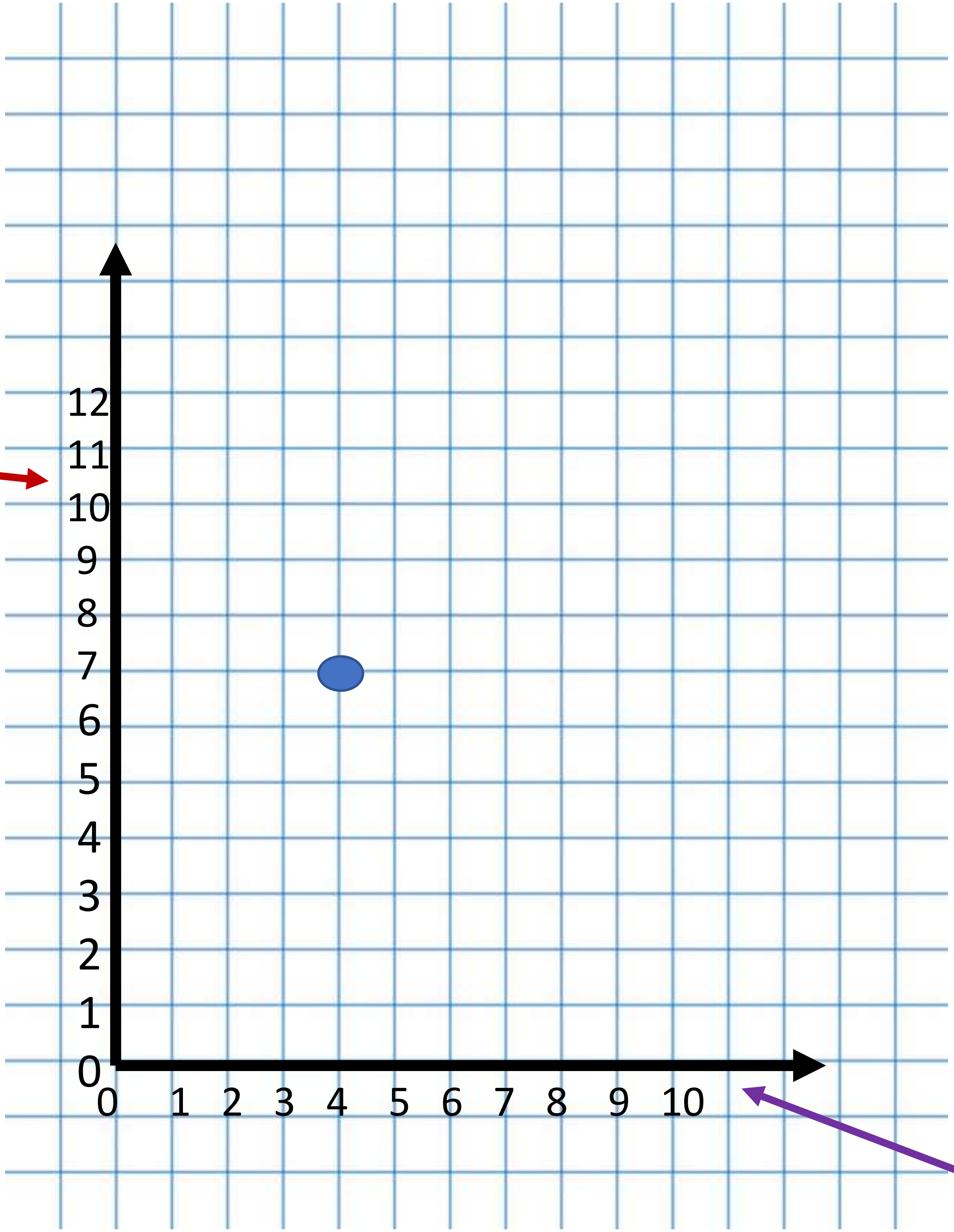
Play Battleships.



Day Two

You were using co-ordinates when you played Battleships.

This is the *y* axis



The χ axis and the *y* axis are numbered **on** the lines, not between the lines.

When you give the co-ordinates of a point, you read the χ axis first and then the *y* axis.
E.g. the co-ordinates for  are (4,7)

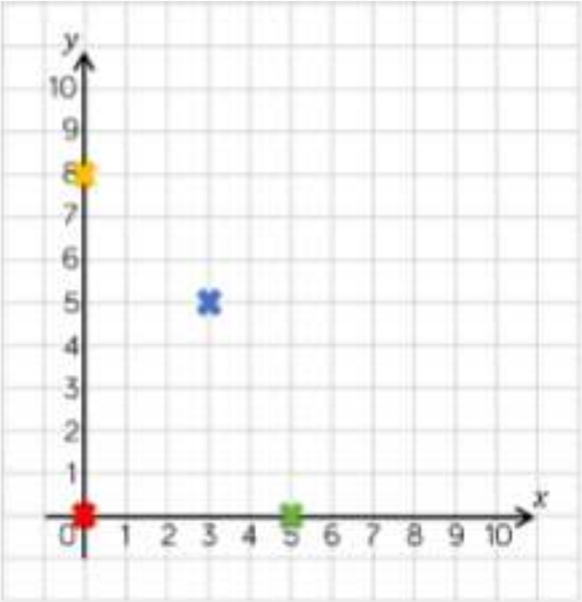
This is the χ axis.

Day Two

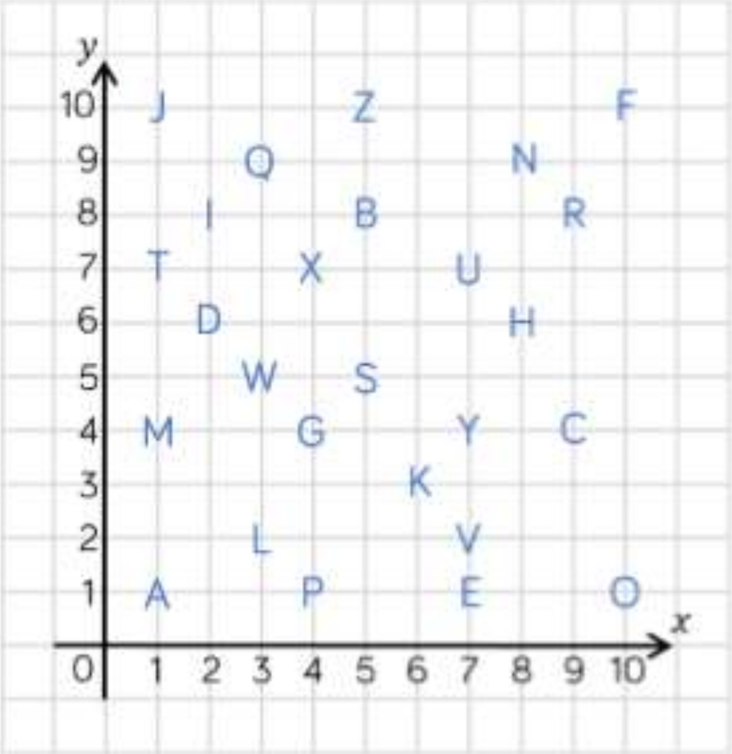
Write the coordinates for the points shown.

(__ , __) (__ , __)

(__ , __) (__ , __)

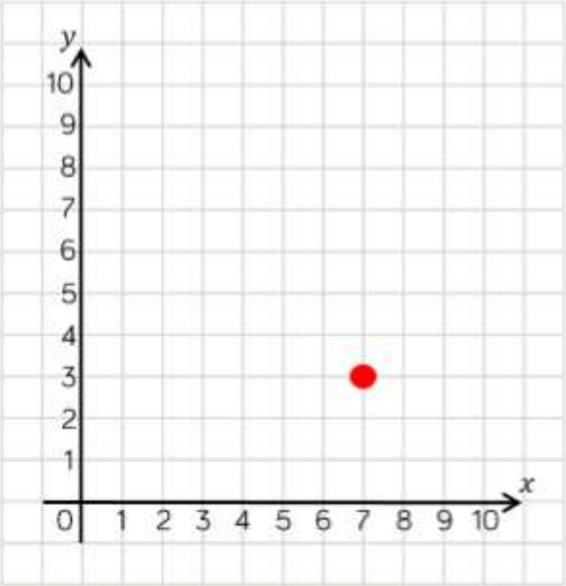


Write out the coordinates that spell your name.



Day Two

Problem solving and reasoning:



The point is plotted at (7, 3)

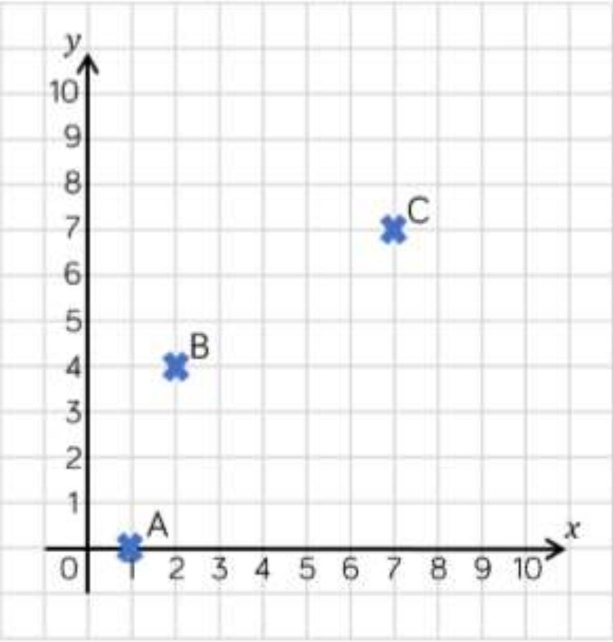
Teddy

Rosie

The point is plotted at (3, 7)

Who is correct?

What mistake has one of the children made?

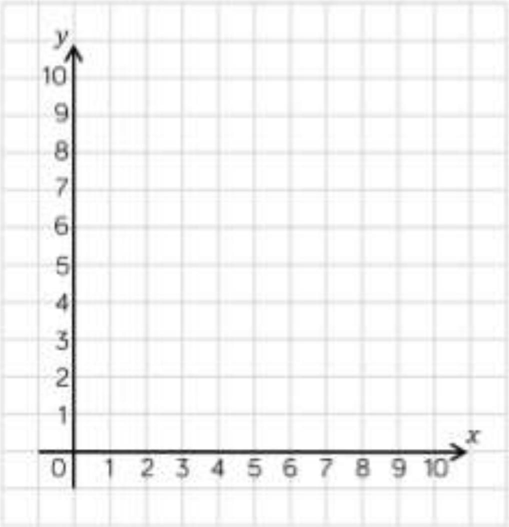


Which clue matches which coordinate?

Clue 1	My x coordinate is half of my y coordinate.
Clue 2	My y coordinate is less than my x coordinate.
Clue 3	Both my coordinates are prime numbers.

Day Three 1.7.20

Draw the shapes at the correct points on the grid.



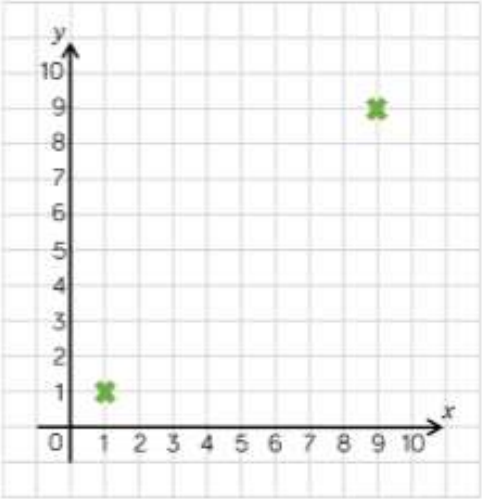
 (7, 8)

 (4, 6)

 (9, 1)

 (10, 0)

Plot two more points to create a square.



Plot these points on a grid.

(2, 4)   (4, 2)   (5, 8)   (7, 6)

What shape has been created?

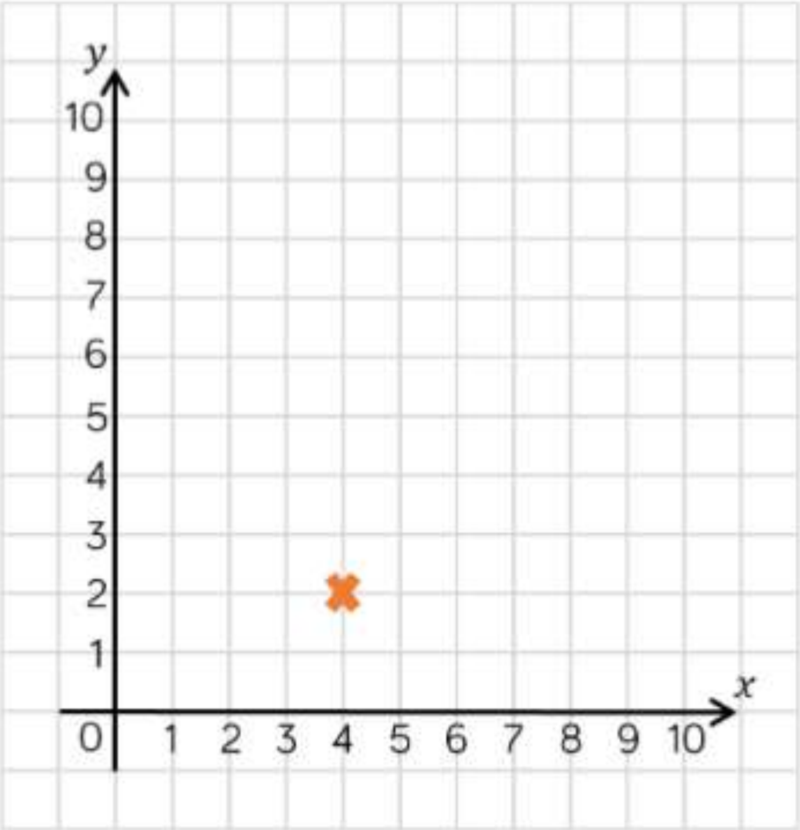
Day Three 1.7.20

Draw different 2D shapes on a grid (squared paper) and write down the co-ordinates for each point on that shape.
Remember to write the X axis first and then the Y axis.

Day Three 1.7.20

Problem solving and reasoning

What shapes could be made by plotting three more points?



When you are plotting a point on a grid it does not matter whether you go up or across first as long as you do one number on each axis.

Amir

Do you agree with Amir?
Convince me.

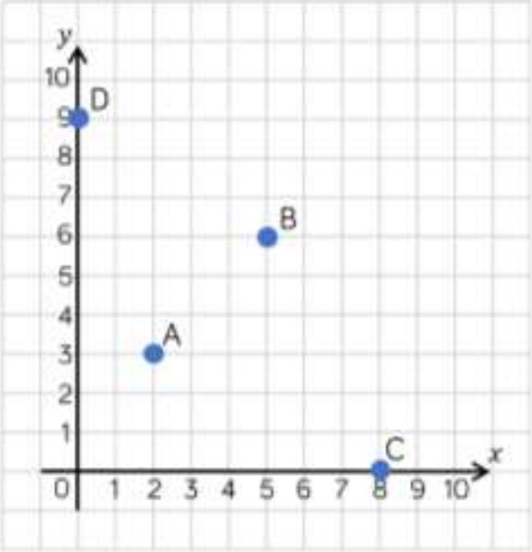
Always, Sometimes, Never.

The number of points is equal to the number of vertices when they are joined together.

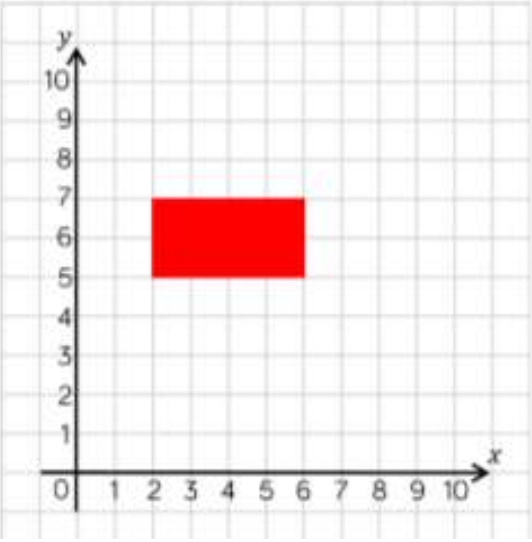
Day Four 2.7.20

Place a small cube on the grid at coordinate (1, 1).
Move your cube 1 up. Move your cube 1 down. What do you notice?
Now move your cube 3 to the right. Move your cube 3 to the left.
What do you notice?

Translate A 6 right and 3 down.
Record the coordinates before (__,__)
and after (__,__)
Translate B and C 4 left and 3 up.
Record the coordinates before (__,__)
and after (__,__)



Translate the rectangle 2 left and 3 up.
Write down the coordinates of each vertex of the rectangle before and after the translation.



Day Four 2.7.20

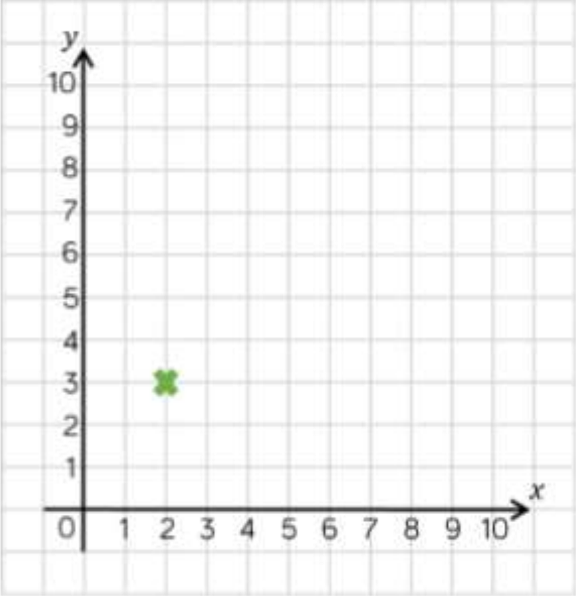
Draw a 2D shape on a grid and write down the co-ordinates for each point.
Now translate the shape, Right 3 squares and Up 1 square. Write down the new co-ordinates of each point.
Now translate the shape again, Left 4 squares and Down 3 squares. Write down the new co-ordinates of each point.
Translate it Right 1 square and Up 2 squares. Write down the co-ordinates of each point.
What do you notice.

Repeat using different 2D shapes.

Note that when you translate a shape, you are NOT rotating it.

Day Four 2.7.20

Problem solving and reasoning



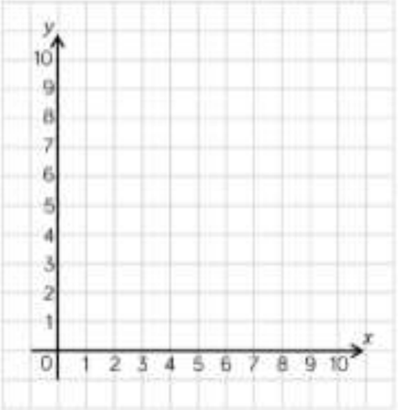
Ron translates the point (2, 3), but realises that it has returned to the same position.

What translation did he do?

Is there more than one answer?

Here is a game to play in pairs:

Each player needs:



1 small cube

One barrier (e.g. a mini whiteboard)

The first player places a cube on their grid. They describe the original position and perform a translation.

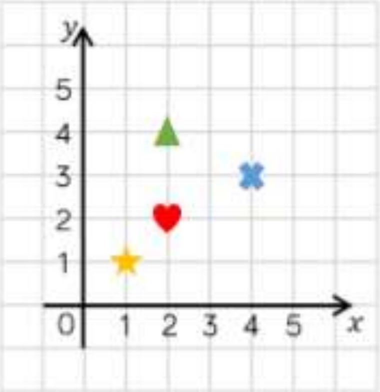
The second player listens to the instructions and performs the same translation.

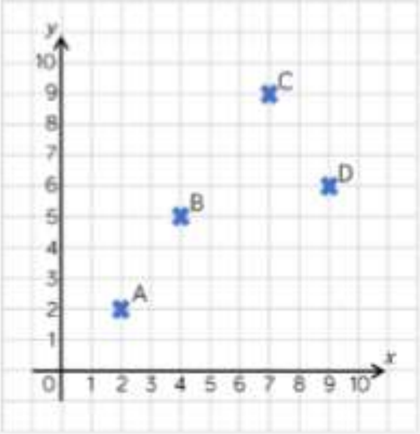
They check to see if they have placed their cube at the same coordinate.

Swap roles and repeat several times.

Day Five 3.7.20

Describe the translation from:





Describe the translation from:

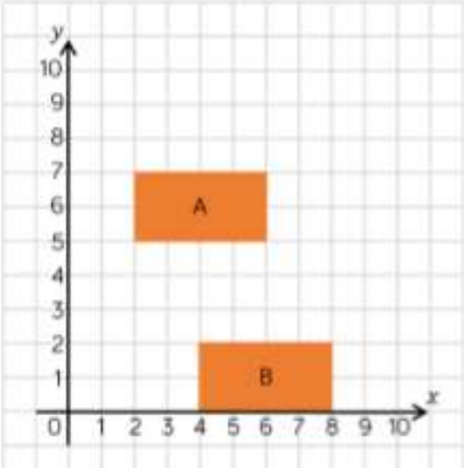
A to B   B to C   C to D   D to A

Plot two new points and describe the translations from A to your new points.

Describe the translation of shape A to shape B.

Describe the translation of shape B to shape A.

What do you notice?



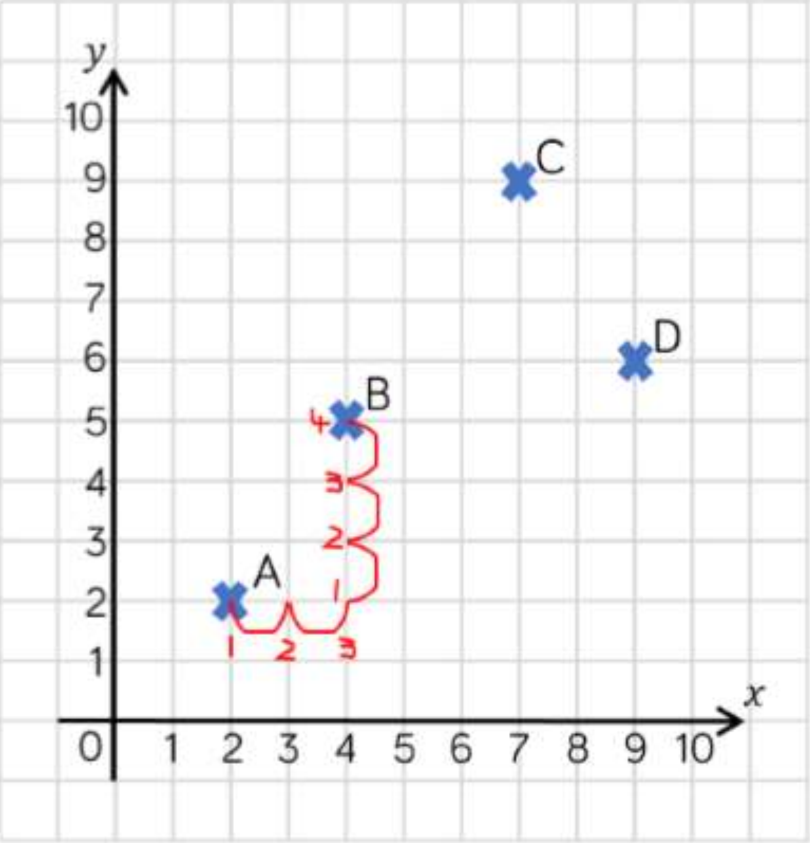
Day Five 3.7.20

Plot 10 random points on a grid. Label them alphabetically from A to J.
Cut up 10 identical small pieces of paper and write one letter on each one, so you have 10 pieces of paper labelled A to J.
Fold each piece of paper and put them in a small container.
Close your eyes and pick out 2 pieces of paper. Describe the movements from one of these letters to the other on your grid.
E.g. Left 3, Down 4.
Fold the pieces of paper and replace them in the container.
Close your eyes and choose another 2 pieces of paper. Describe the movements from one letter to the other on your grid.
Repeat until you have done all the possible combinations of letters.

Day Five 3.7.20

Problem solving and reasoning

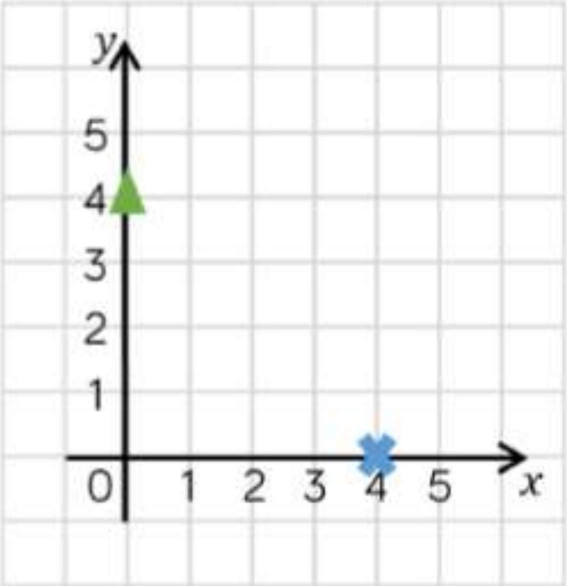
Tommy has described the translation from A to B as 3 right and 4 up.



Can you explain his mistake?

 to  is 4 right and 4 down.

 to  is 4 left and 4 up.



Can you plot other pairs of points where to move between them, you travel the same to left or right as you travel up or down?

What do you notice about the coordinates of these points?