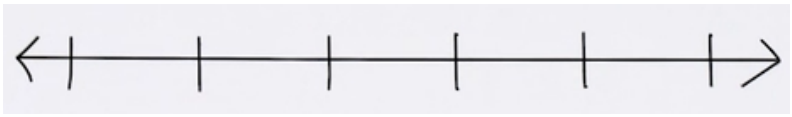
5th Grade Mission 6 Notes

On a **number line** the distance between each tick mark **MUST** be the same distance

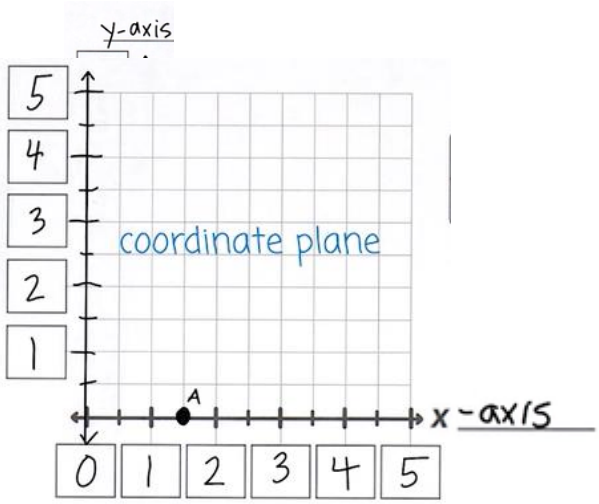


Origin – is the beginning of the number line

Coordinate- a point's distance from 0.

Midpoint- means middle of two objects.

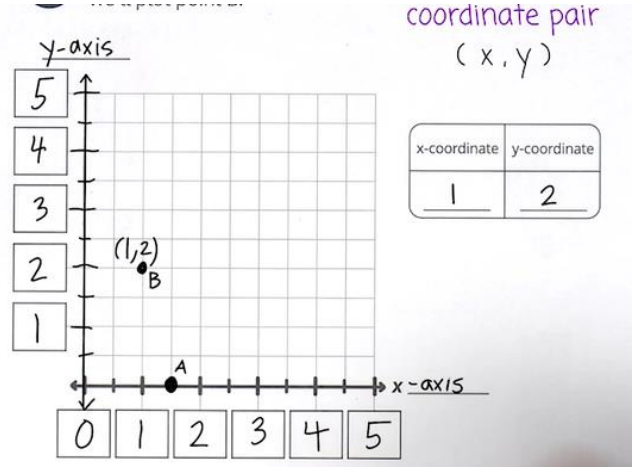
Vertical line = y – axis



Horizontal line = x – axis

When writing a **coordinate pair**, you write the **(x-axis point, y-axis point)**

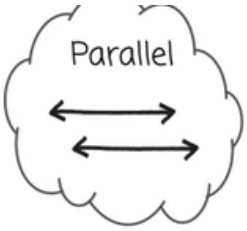
The **first number** in a **coordinate pair**, tells you where to **travel over on the x-axis**. The **second number**, tells you where to **travel up the y-axis.**



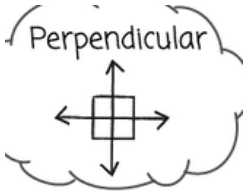
We're trying to find the shape that is 3 $\frac{1}{2}$ units from the y-axis.

Another way to ask this is: what shape has an x-coordinate of 3 $\frac{1}{2}$?

To find out what each line is worth between the whole numbers, **count the squares to determine the fractional units.**



Parallel lines are lines that never touch.



Perpendicular lines are lines that cross to form right angles.

$\overline{AB} \perp \overline{BC}$

Has a pair of perpendicular line segments	Does not have a pair of perpendicular line segments
	

Right angle		A square can go in the corner of the angle. Measures 90°

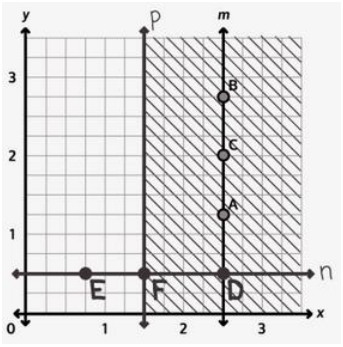
Vertical line goes up and down. 

Horizontal line goes left and right.

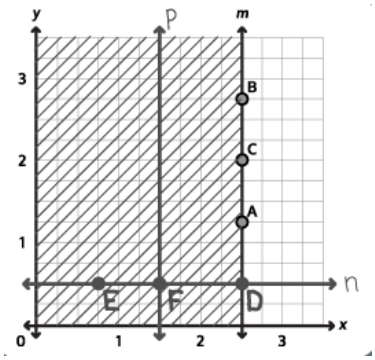
The **x-axis point** tells us the <u>distance a point is from the y-axis.</u>

The **y-axis** tells us the <u>distance a point is from the x-axis.</u>

When looking at an area of the coordinate plane that is **greater** than a number, circle or draw a line at the number, then **shade to the right**.



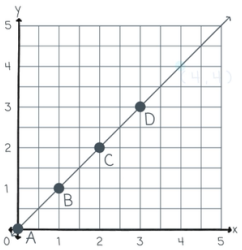
When looking at an area of the coordinate plane that is **less** than a number, circle or draw a line at the number, then **shade to the left.**



When **determining the rule** for a coordinate plane, look for a <u>pattern within the x coordinate</u> <u>and y coordinate.</u>

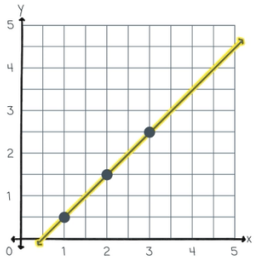
Rule: x and y are equal
Rule: y is equal to x

Point	x	y	(x,y)
A	0	0	(0,0)
B	1	1	(1,1)
C	2	2	(2,2)
D	3	3	(3,3)



Rule: _____

x	y	(x,y)
1	$\frac{1}{2}$	$(1,\frac{1}{2})$
2	$1\frac{1}{2}$	$(2,1\frac{1}{2})$
3	$2\frac{1}{2}$	$(3,2\frac{1}{2})$



More than- addition operation

Less than- subtraction operation

Times or as much as- multiplication operation

Steeper- means harder to climb because of the incline.

Steepest- multiplied by the greatest factor

Least Steepest- multiplied by the least factor

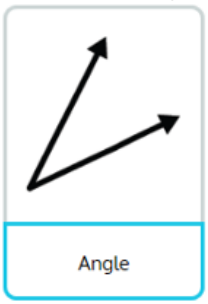
Multiply whole number by fraction:

$\frac{3}{3} \times \frac{1}{3} = \frac{3}{3} = 1$

Line Segment

Line with 2 endpoints

$\overline{NM}$



Angle

2 rays that share the same endpoint

$\angle DBE$

Line

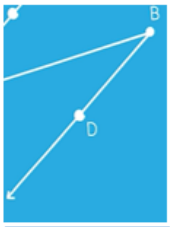
Line with arrows on both sides; goes one forever

$\overleftrightarrow{MO}$

Point

dot

B



ray

One endpoint on one side and an arrow on the other side

$\overrightarrow{BD}$

$\overline{AB} \parallel \overline{CD}$

Parallel lines never touch now matter how far you extend them.

When <u>one coordinate is given but not the other</u>, place your finger on the given coordinate and follow the line to find the missing coordinate.

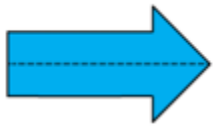
When sliding the triangle to the **left**, the x coordinate will **decrease**, but the y coordinate **stayed the same.**

When sliding the triangle to the **right**, the x coordinate will **increase** , but the y coordinate **stayed the same.**

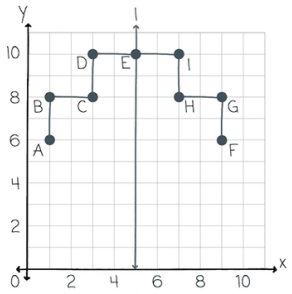
When sliding the triangle **up**, the x coordinate will **stay the same**, but the y coordinate will **increase.**

When sliding the triangle **down**, the x coordinate will **stay the same**, but the y coordinate will **decrease.**

Line of symmetry- sides match perfectly when folded. A line passing through the center of a shape is always a line of symmetry.



When trying find points that are symmetrical on a coordinate plane, count the number of units one dot is from the line of symmetry.



Points that are symmetrical over line *m* have the same x-coordinate , but do not have the same y-coordinate .

Points that are symmetrical over line *l* have the same y-coordinate , but do not have the same x-coordinate .

When looking for most change in data, you look for steepest line.

When looking for least change in data, you look for flat line or smallest line.