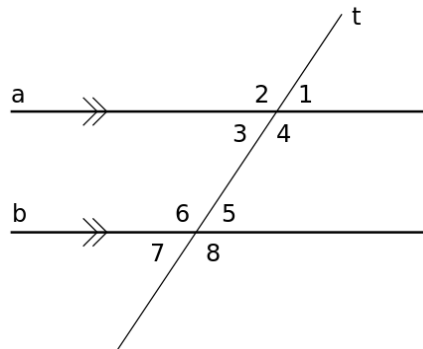
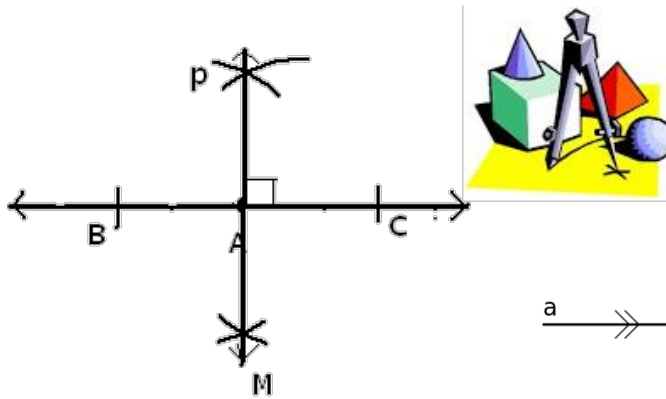
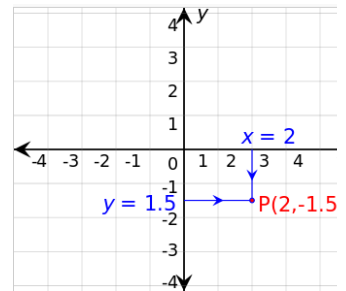
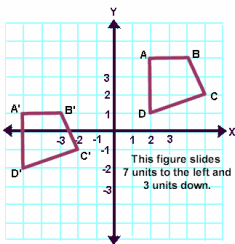


Unit 8: Geometry



Section 6.5 First**Coordinate Graphing**

Coordinate graphing is plotting points on a grid, often called a Cartesian grid. The grid has an **x** and a **y** axis.



The x axis is the horizontal axis (it goes from left to right). 

The y axis is the vertical axis (it goes up and down). 

The points that you plot are called **ordered pairs, (x,y)**.

The first number in the ordered pair is the x coordinate, and it tells you how far to move to the left or the right. If the x coordinate is positive, move to the right, if the x coordinate is negative, move to the left.

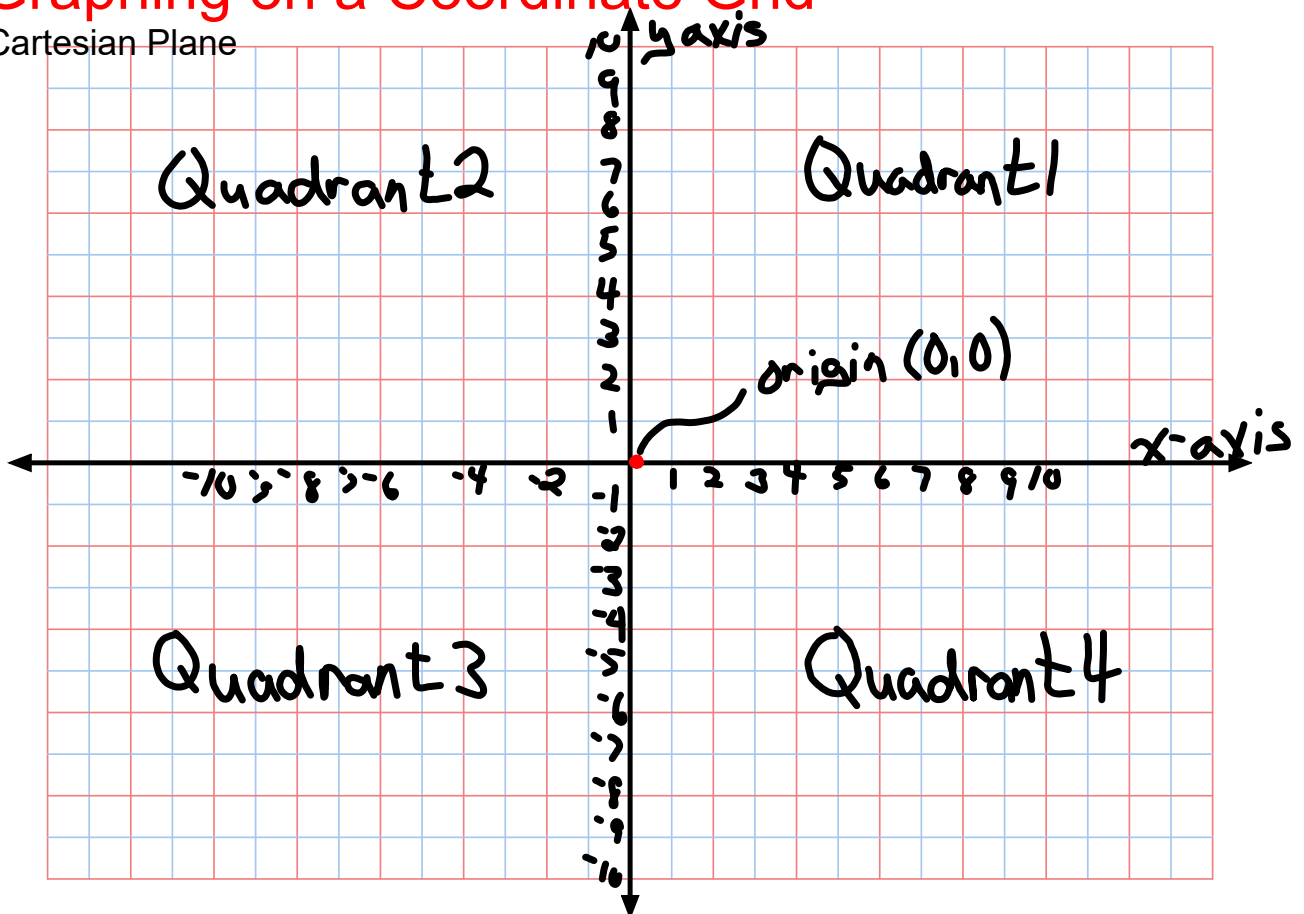
The second number in the ordered pair is the y coordinate and it tells you how far to move up or down. If the y coordinate is positive, move up, if it negative, go down.

You always start at the **origin, which is point (0,0)**.

The grid is divided up into 4 sections that are called **quadrants**.

Graphing on a Coordinate Grid

Cartesian Plane



The axes meet at the **origin**, $(0,0)$.

A pair of coordinates is called called an **ordered pair**, (x,y) .

What is the scale on each axis?

1 block = 1 unit both x, y

Write the coordinates of each point.

(include what quadrant)

(x, y)

Quad

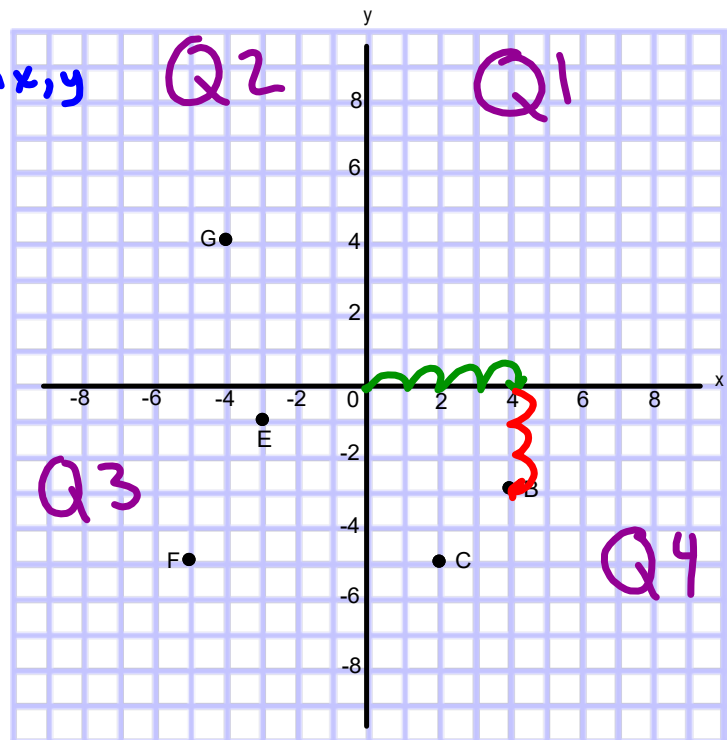
B (4, -3) Q 4

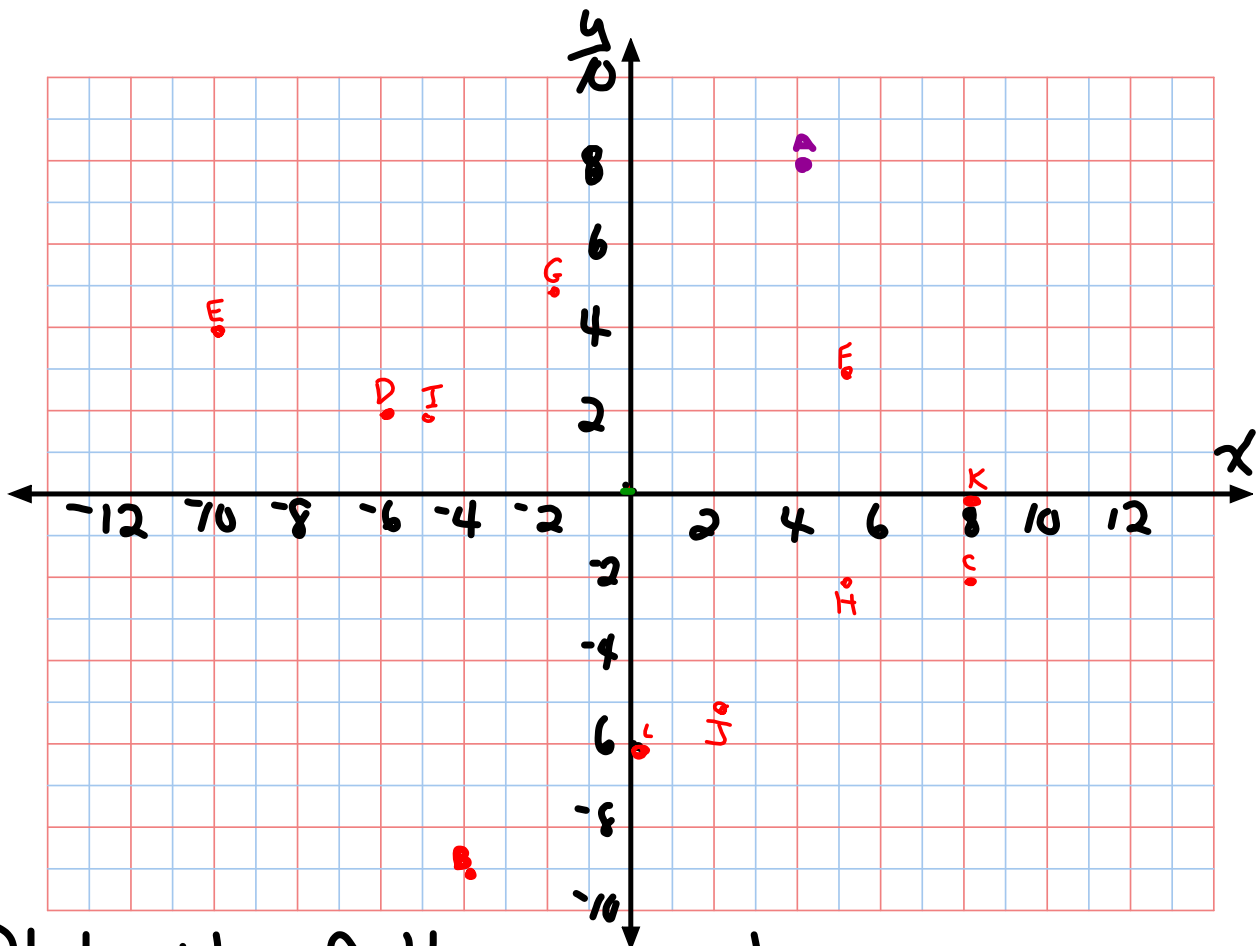
C (2, -5) Q 4

E (-3, -1) Q 3

F (-5, -5) Q 3

G (-4, 4) Q 2



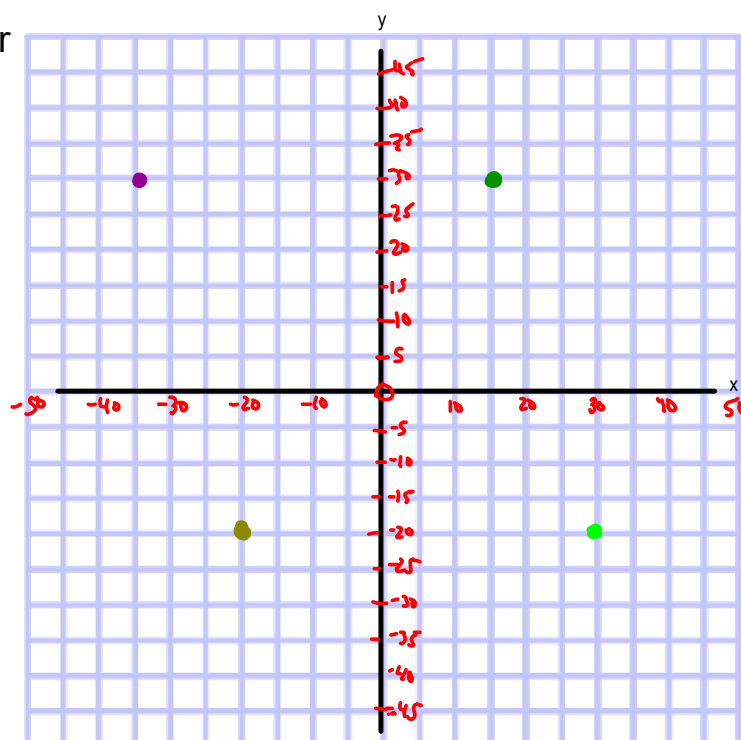


Plot the following points:

- | | | |
|---------------|----------------|---------------|
| $A(4, 8)$ ✓ | $B(-4, -9)$ ✓ | $C(+8, -2)$ ✓ |
| $D(-6, +2)$ ✓ | $E(-10, +4)$ ✓ | $F(5, 3)$ ✓ |
| $G(-2, 5)$ ✓ | $H(5, -2)$ ✓ | $I(-5, 2)$ ✓ |
| $J(2, -5)$ | $K(8, 0)$ | $L(0, -6)$ |

Determine an appropriate scale for plotting the following points: $(-35, 30)$, $(15, 30)$, $(-20, -20)$ and $(30, -20)$. Create the grid and plot the points.

(1 block = 5 units
on
both axis)



Class / Homework

pg. 318 # 1 to # 6

1) | block \equiv 5 units
2 block = 10

A (,)

B (,)

C (,)

D

E

F

G

H

I

J

K

1. What is the scale on each axis?
Write the coordinates of each point from A to K.

2. Use the coordinate grid to the right.

Which points have:

a) x-coordinate 0?

$(0, \#)$ B, E, F

b) y-coordinate 0?

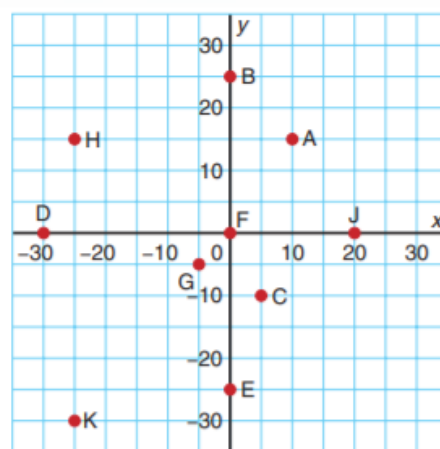
$(\#, 0)$ D, F, J

c) the same x-coordinate?

d) the same y-coordinate?

e) equal x- and y-coordinates?

f) y-coordinate 2?



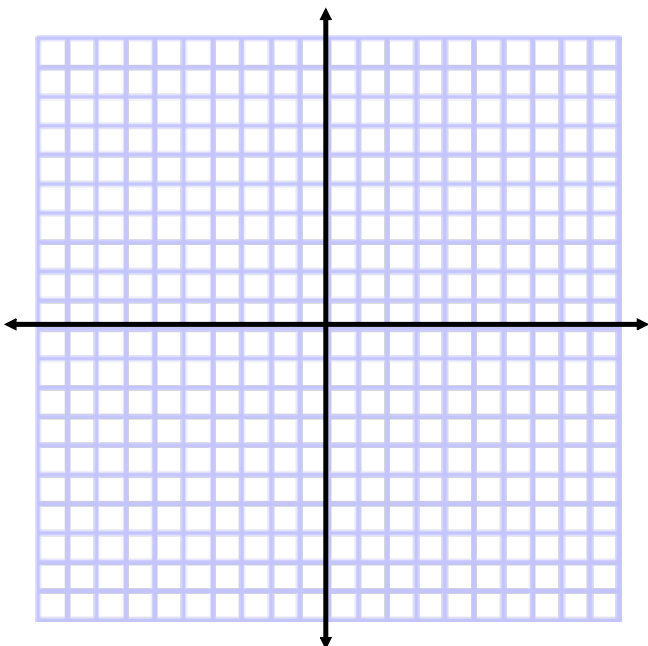
c) H, K , BFE
 $x = -25$, $x = 0$

- 3.** Draw a coordinate grid. Look at the ordered pairs below.
Label the axes. How did you choose the scale?

Plot each point.

- | | | |
|-----------------|-----------------|-----------------|
| a) $A(30, -30)$ | b) $B(25, 0)$ | c) $C(-10, 35)$ |
| d) $D(-15, 40)$ | e) $E(15, 5)$ | f) $F(0, -20)$ |
| g) $O(0, 0)$ | h) $H(-20, -5)$ | i) $I(-40, 0)$ |

Which point is the origin?



- 4.** How could you use the grid in question 3 to plot these points?
- | | | |
|--------------|----------------|----------------|
| a) $K(3, 5)$ | b) $P(-10, 2)$ | c) $R(-7, -8)$ |
|--------------|----------------|----------------|

5. Which quadrant has all negative coordinates? All positive coordinates?
Both positive and negative coordinates?

6. a) Plot these points: $A(0, 5)$, $B(-1, 4)$, $C(-1, 3)$, $D(-2, 3)$,
 $E(-3, 2)$, $F(-2, 1)$, $G(-1, 1)$, $H(-1, 0)$, $J(0, -1)$, $K(1, 0)$,
 $L(1, 1)$, $M(2, 1)$, $N(3, 2)$, $P(2, 3)$, $R(1, 3)$, $S(1, 4)$
b) Join the points in order. Then join S to A.
c) Describe the shape you have drawn.

