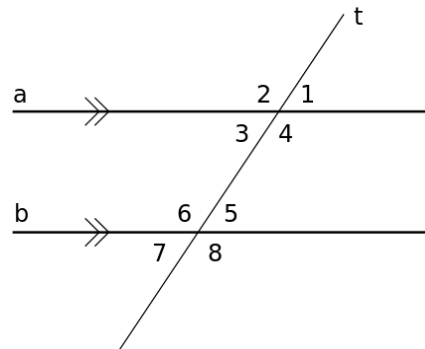
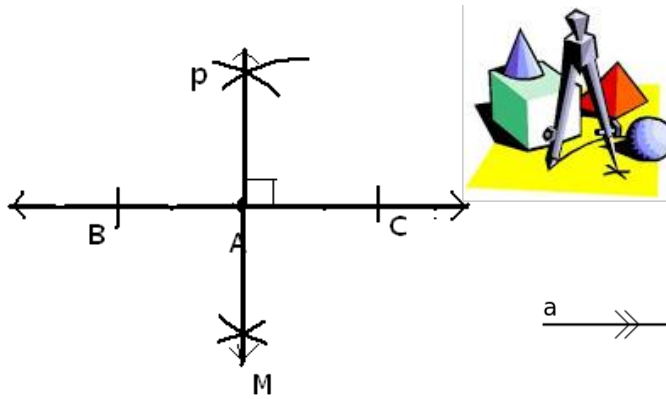
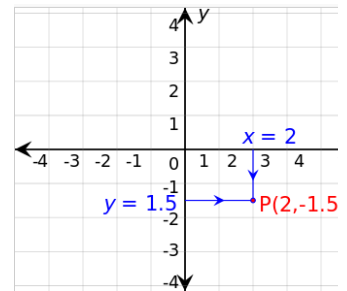
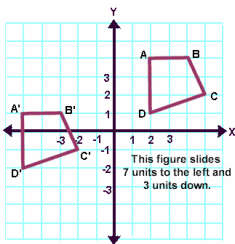



Unit 8: Geometry



Section 8.5 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.

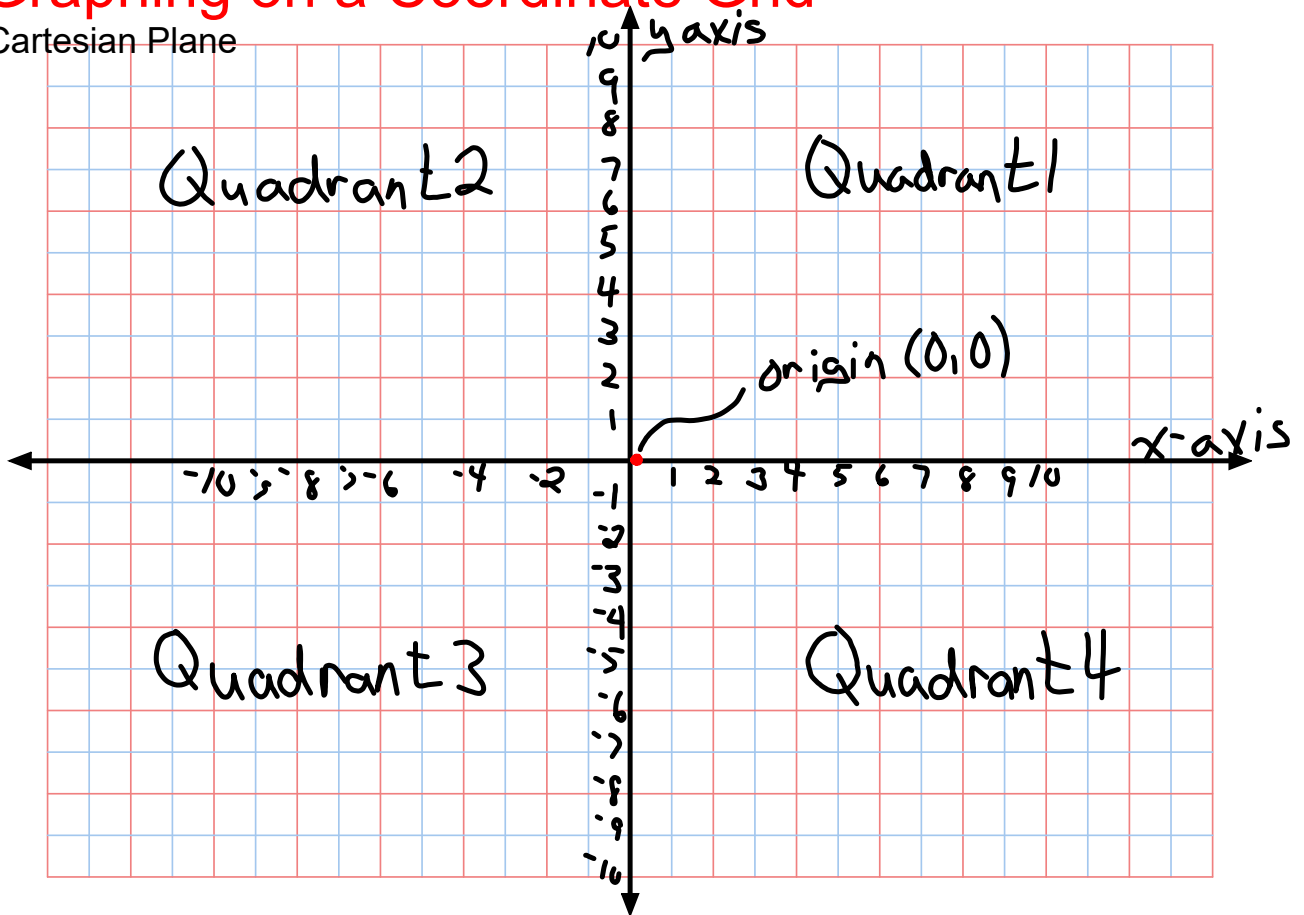
The second number in the ordered pair is the y coordinate and it tells you how far to move up or down. If the y coordinate is positive, move up, if it negative, go down.

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

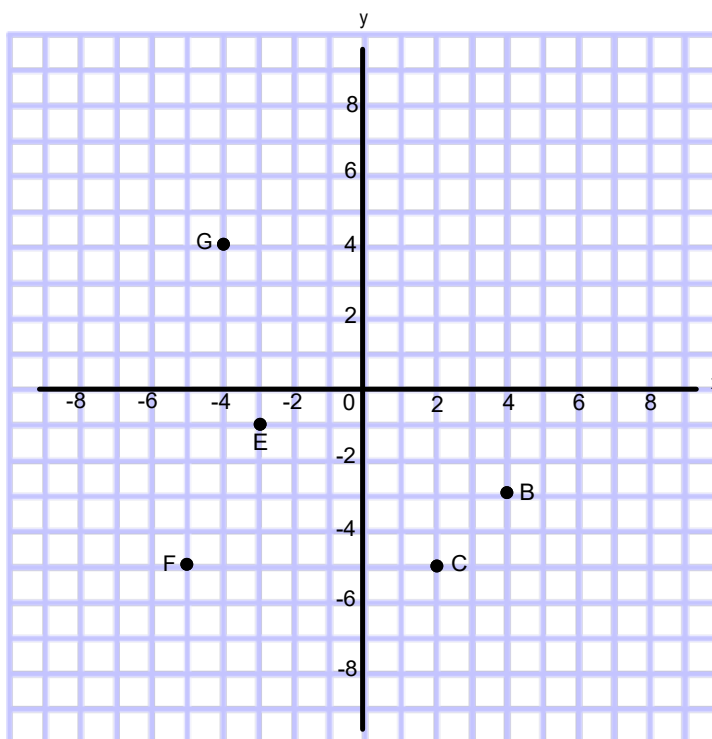


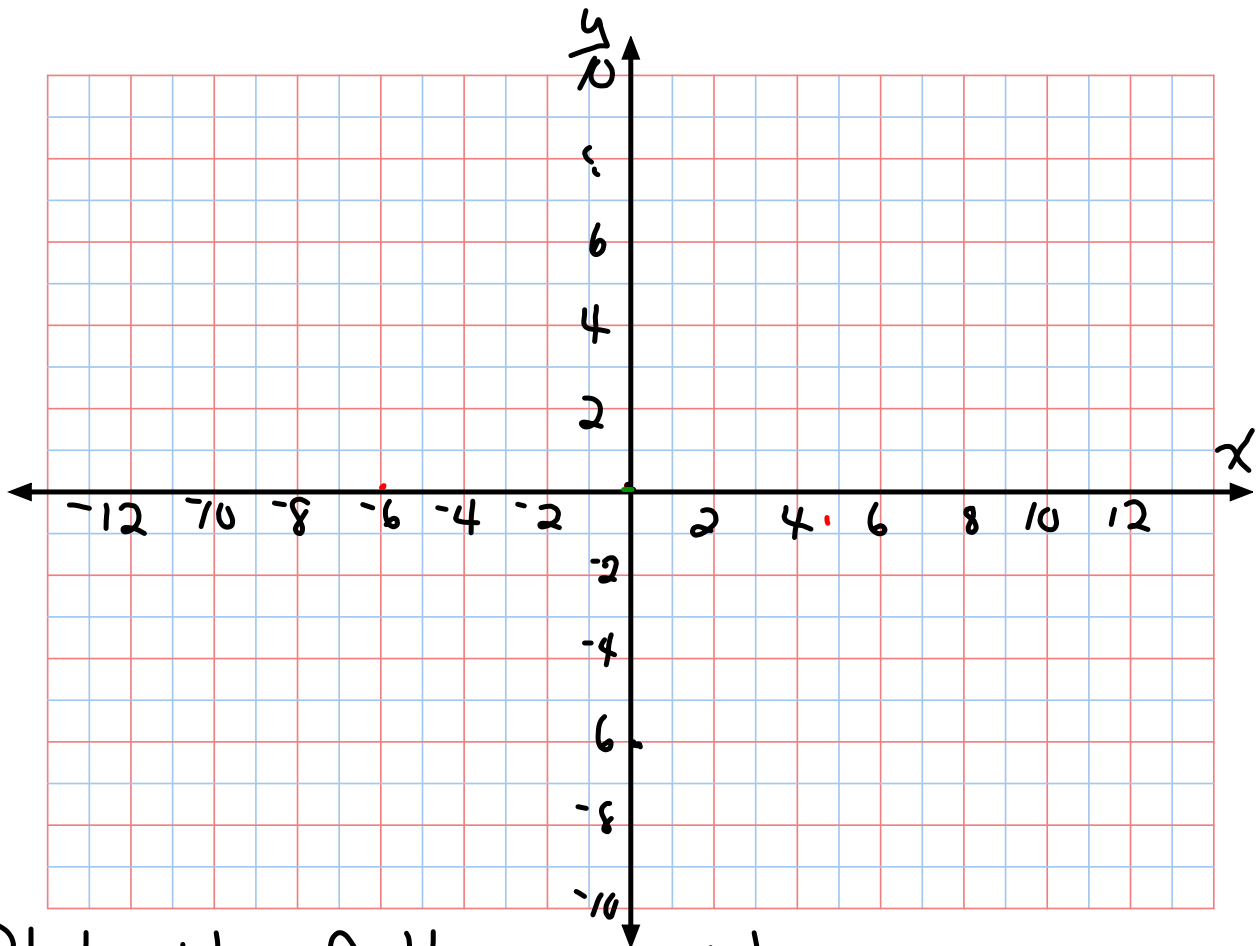
The axes meet at the **origin**, $(0,0)$.

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

What is the scale on each axis?

Write the coordinates of each point.

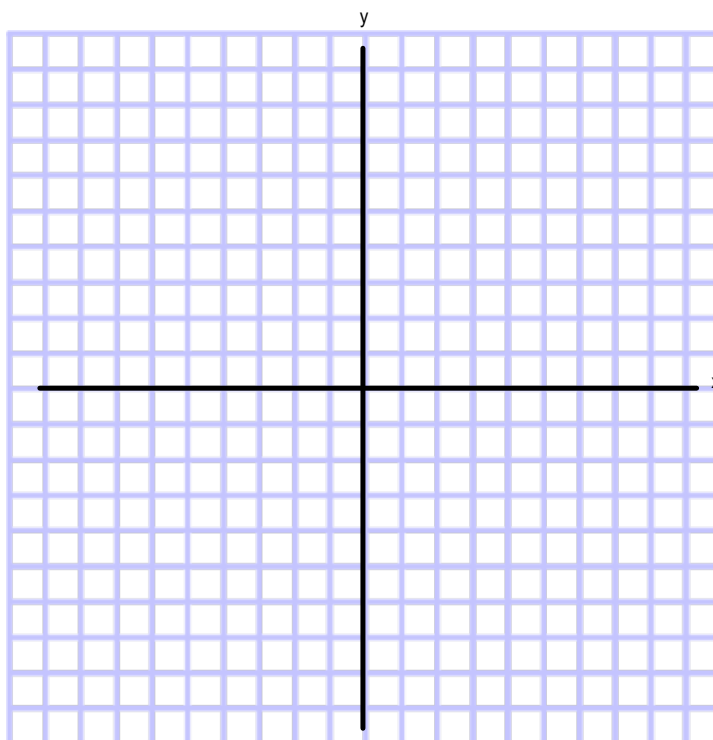




Plot the following points:

- | | | |
|-----------|------------|-----------|
| 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.



Class / Homework

pg. 318 # 1 , 2 , 5

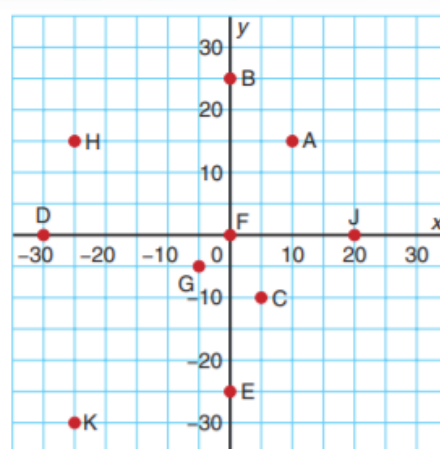
1. What is the scale on each axis?

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?
- b) y -coordinate 0?
- c) the same x -coordinate?
- d) the same y -coordinate?
- e) equal x - and y -coordinates?
- f) y -coordinate 2?



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.



solutions to HW

8.5 Graphing on a Coordinate Grid, page 318

1. Each grid square represents 5 units.

A(10, 15); B(0, 25); C(5, -10); D(-30, 0);

E(0, -25); F(0, 0); G(-5, -5); H(-25, 15);

J(20, 0); K(-25, -30).

2.a) B, E, and F

b) D, F, and J

c) B, E, and F; H and K

d) D, F, and J; A and H

e) F and G

f) none

3. Answers may vary. For example: Each grid
square represents 5 units.

O is the origin.

2a) $x = 0$

$(0, \neq)$

BEF

b) $y = 0$

$(\neq, 0)$

DFJ

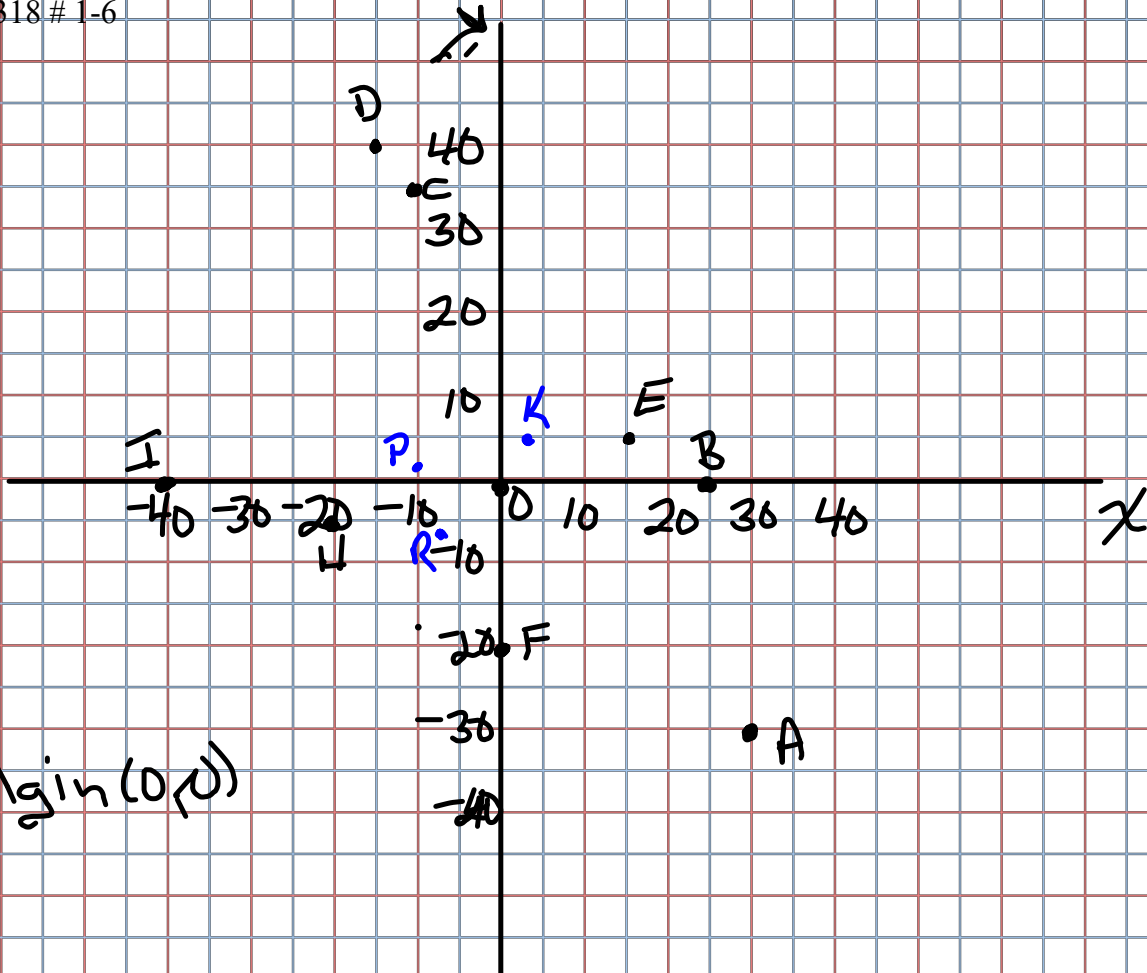
see

next

page

pg. 318 # 1-6

3.



origin (0,0)

5. Quadrant 1

x and y are positive

Quadrant 2

x is negative, y is positive

Quadrant 3

x and y are negative

Quadrant 4

x is positive, y is negative.

b.

