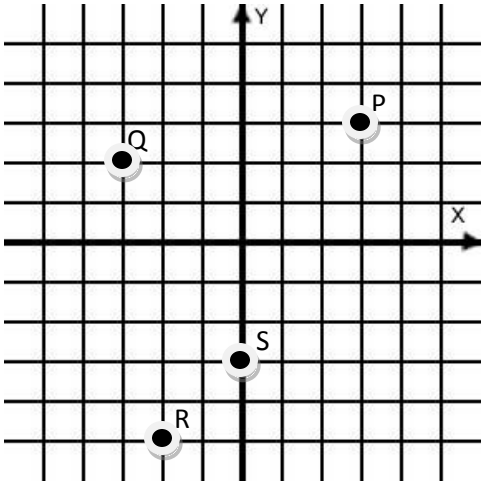
Math 20 Unit 2 4.1 to 4.8, 5.1 to 5.3

To the Test – be sure to bring:

(1) your personally-prepared 8 ½ " by 11" study guide for this test
(2) your simple, non-graphing calculator and
(3) your pencils
(4) your BluGold ID

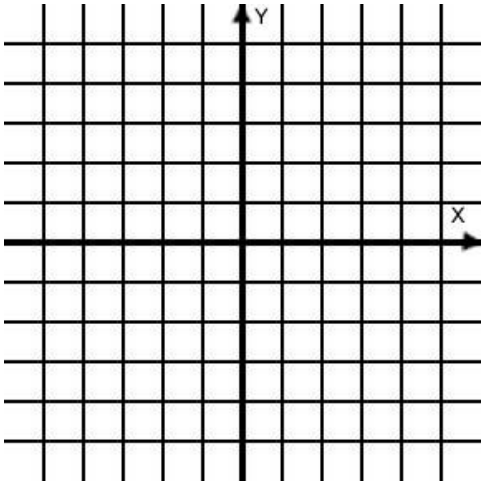
---

1. Give the coordinates of points P, Q, R, and S with an ordered pair and then identify the quadrant in which each point lies.

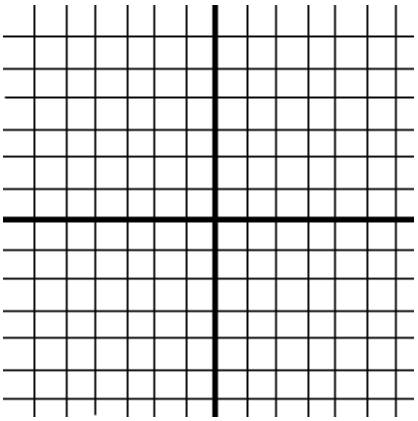


	Coordinates	Quadrant
P	_____	_____
Q	_____	_____
R	_____	_____
S	_____	_____

2. Graph and label the points corresponding to A (4, -2), B (-2, 0), C (-3, 4), D (0, -4), E (1, 3), F (-2, -3)

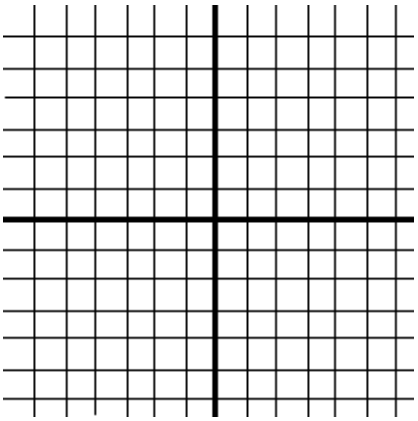


3. Identify a second point on the line containing the point $(-2,3)$ and with the slope $m=\frac{3}{4}$, then graph the line. Second Point: (_____, _____) Graph:



4. Graph the line containing the point $(-4,2)$ and with the slope $m = undefined$

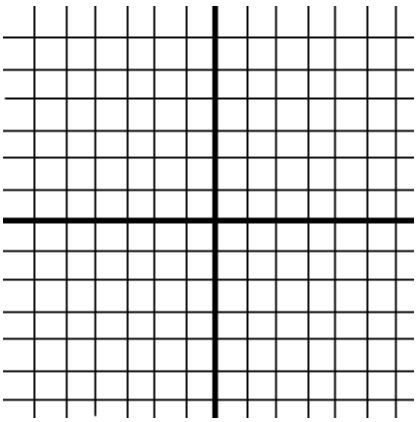
Graph:



5. Given the *standard form* of the equation of a line: $3x+y=6$

(a) Give the *slope-intercept form* of the line: _____

(b) State the y-intercept point: (_____, _____) and (c) Graph the line:



6. Write the equation of the line, in *slope-intercept form*, of a line

containing the point $(0, 2)$ and with the slope $m = -3$

Write the equation of the line, in *slope-intercept form*, of a line

containing the point $(4, 0)$ and with the slope $m = 3$

7. Use the point-slope formula to find the 'b' value in the equation of the form $y = mx + b$ of a line containing the points: $(5, -6)$ and $(1, 0)$

8. First, find the slope of the line *L*: $6x-7y=14$ Slope of Line *L* is : _____

   Next, write the equation of a line, in *slope-intercept form*, that is **parallel** to line L and passing through the point $(0,-6)$. Express any fractions as simplified, improper fractions if necessary.

9. Finally, write the of an equation of a line, in slope-intercept form, that is perpendicular to line L and passing through the point $(0,-6)$. Express any fractions as simplified, improper fractions if necessary.

10. Consider the following three relations. For each, determine if the relation is a function (y as a function of x) and, if it is a function, state the domain of the function.

$$y=x+4 \qquad y=\frac{3}{2x-16} \qquad y^2-3=x$$

11. Let $f(x) = -4x - 6$. Find $f(3)$

Let $k(n) = n + 9$. Find $k\ 8$

12. Let $f(x) = -4x - 6$. When a certain value V was used for x, the result was 2.
Find the value of V when $f(V) = 2$

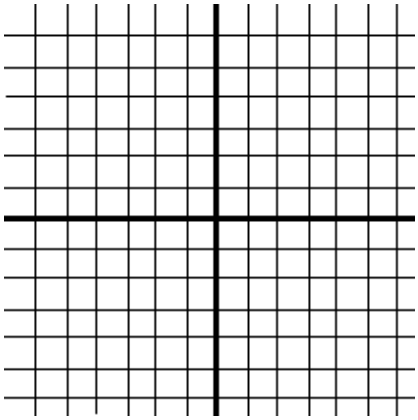
Let $k(n) = n + 9$. Find a when $k\ a\ = 5$

13. Solve the system of equations by ***graphing***. Then, identify the solution point.

$$y = \frac{1}{2}x + 2$$

$$y = 2x - 1$$

Solution point: $(x, y) = (\quad , \quad)$



14. Solve the system using the ***substitution*** method.

$$x + 3y = -12$$

$$3x + 4y = -6$$

Solution point: $(x, y) = (\quad , \quad)$

15. Solve the system using the ***substitution*** method.

$$6y - x = 5$$

$$-24y = -4x - 20$$

Solution point: $(x, y) = (\quad , \quad)$

16. Solve the system by using the ***elimination*** method.

$$3x+4y=9$$
$$5x+6y=19$$

Solution point: $(x,y)=$ (,)

17. Solve the system by using the ***elimination*** method.

$$3x+4y=9$$
$$16-3x=4y$$

Solution point: $(x,y)=$ (,)