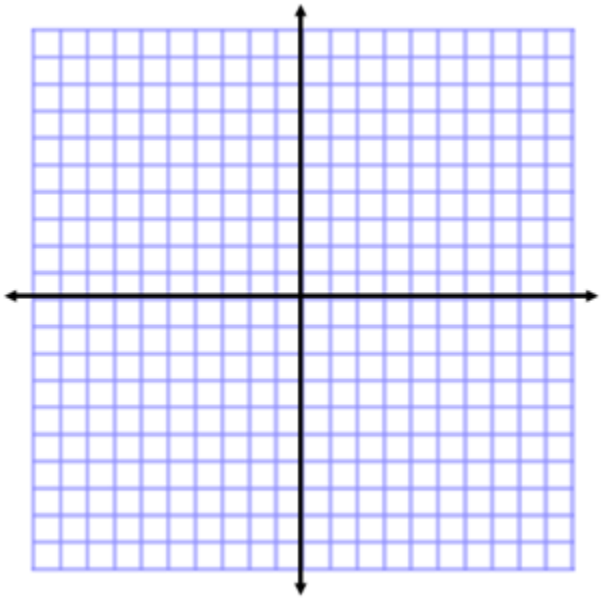
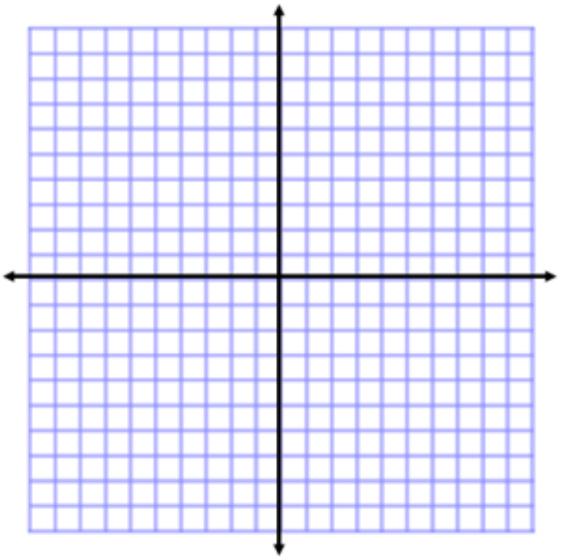
4.1 The Cartesian Coordinate System and Reading Graphs



There is a one-to-one correspondence between points in a plane and ordered pairs of real numbers.

1) Plot the points:

Point	Quadrant
A (2,1)	
B (-2,3)	
C (-3, -2)	
D (1, -2)	
E (3, 0)	



Equations in two variables ax+by=c

To graph, find solutions in the form of ordered pairs

- The order of the numbers in the ordered pairs is critical
    - x-the first coordinate or _____ variable
    - y-the second coordinate or _____ variable
- from the graph, you determine if there is a relationship and, if so, that relationship is increasing or decreasing

2) Which of the following ordered pairs satisfy the equation?

$2x - y = 4$

a) (1,1) b) (2,0) c) (1,-2) d) (3,2)

$2x - 3y = 7$

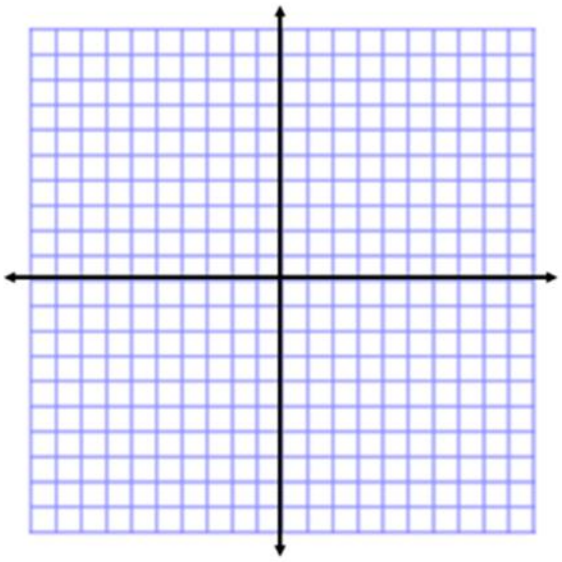
a) (1,3) b) $\left(\frac{1}{2}, -2\right)$ c) $\left(\frac{7}{2}, 0\right)$ d) (2,1)

3) Determine the missing coordinate in each of the following ordered pairs so that the point will satisfy the equation $2x + 3y = 12$.

(0,) (3,) (,0) (,-2)

4) Complete the table and graph. $y = \frac{3}{2}x - 1$

X	Y
0	
	2
-2	
	-5/2



5) Given the equation $d=16t^2$, where d is the distance an object falls in feet and t is the time in seconds that the object falls. Make a table of ordered pairs for the values of t and d with the values of 1, 2, 3.5, 4, 4.5 and 5 for t seconds. And graph the points corresponding to the ordered pairs. The points do not lie on a straight line. What feature of the equation might indicate to you that the graph is not a straight line?

This document is 100% funded by the MoSTEMWINs $19.7 million grant from the U.S. Department of Labor, Employment and Training Administration (TAACCCT). The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.