Today's lesson and objectives

Graphs of equations

- Sketch the graph of a two-variable equation
- Find x and y intercepts of an equation
- Use symmetry to sketch a graph
- Use graphs to solve problems

1.2 Graphs of Equations

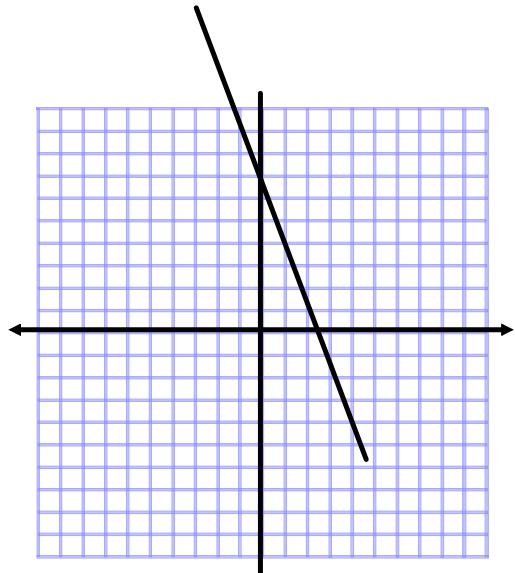Vocabulary:

1) Equation in two variables:

    a) Solution (of equation in two variables)

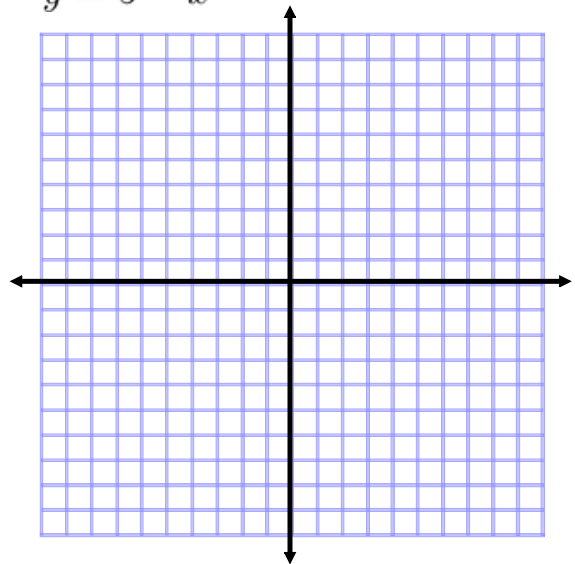   b) Graph

    c) x-intercept
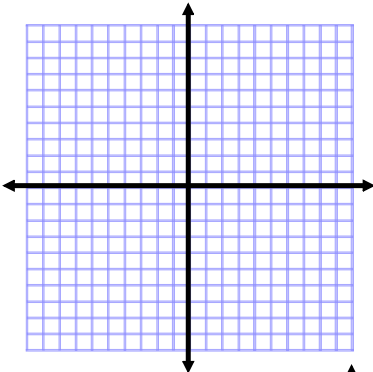
    d) y-intercept

Examples:

1) Does the point (1,5) lie on the graph of $y = 4 - |x - 2|$

2) Complete the table of values and sketch the graph of $y = 5 - x^2$

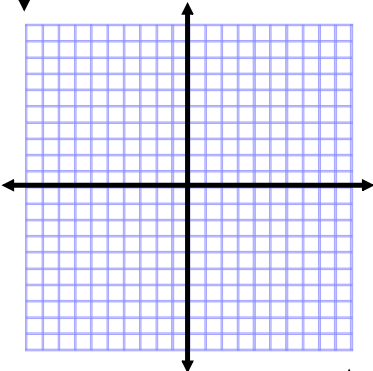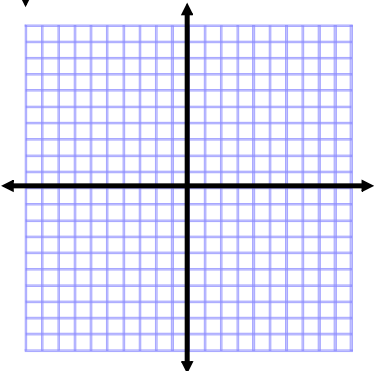|	

2) Symmetry:

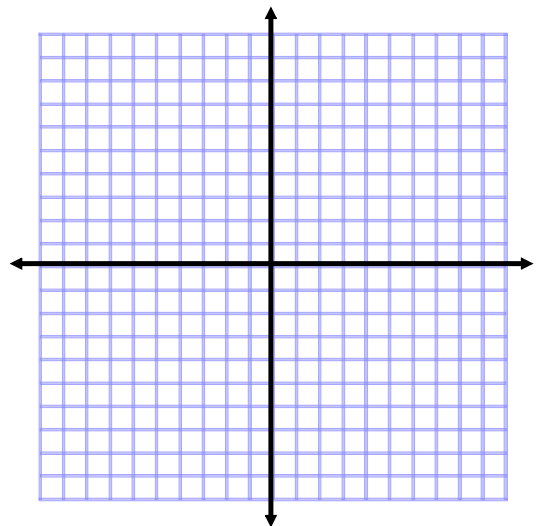a) With respect to the x-axis

b) With respect to the y-axis
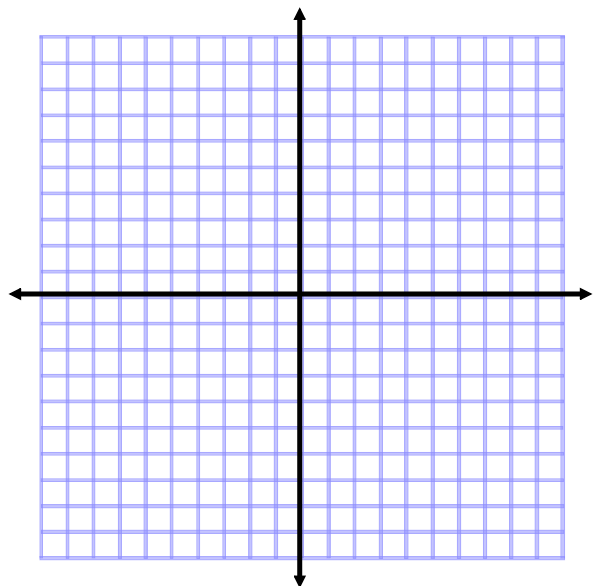
c) With respect to the origin

3) Find the x-intercept and the y-intercept and use symmetry to sketch a graph of these equations.
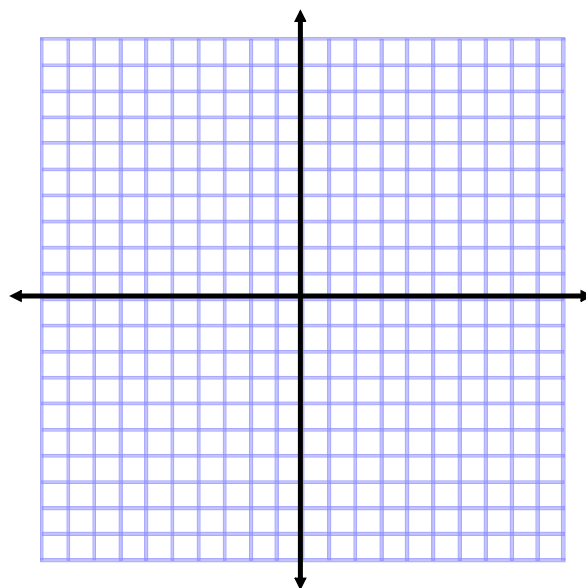
$$y^2 = x + 1$$

4) Find the x-intercept and the y-intercept and use symmetry to sketch a graph of these equations.
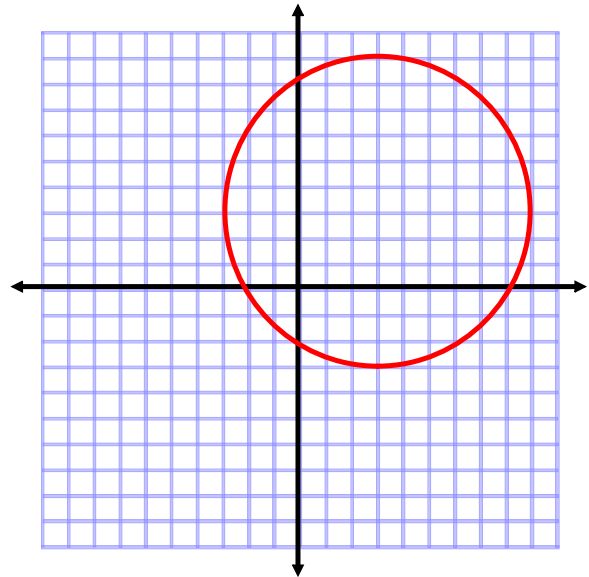
$$y = x^4 - x^2 + 3$$

4) Find the x-intercept and the y-intercept and use symmetry to sketch a graph of these equations.

$xy = 4$

CIRCLES

standard equation of the circle with center (h, k) and radius r

What is the standard equation of the circle with center at (-3,2) with radius 3:

5) Write the standard form of the equation of a circle with endpoints of the diameter at (-4,-1) and (4,1)