1.1 Graphs of Equations

Sketch a graph and find an equation that fits the following conditions.

1. Linear equation symmetric over the origin.

2. Quadratic equation symmetric over y-axis with an x-intercept of (3, 0).

3. Symmetric over x-axis, y-axis & origin and has y-intercepts of (0, 4) and (0, -4).

Identify the intercepts, symmetry for each equation and use that to sketch a graph.

5. $y = -x^2 - x - 6$

6. $y = \sqrt{3-x}$

7. $y = |x| - 3$

Write the equation of the circle given the following conditions.

8. Center (-12, 5) and radius 6.

9. Center (5, 6) and solution point (2, 10).

10. Endpoints of diameter are $(\frac{3a}{2}, \frac{b+1}{3})$ & $(3-a, \frac{-5b}{2})$.

11. Bob can dig a 10ft by 10ft hole in 5 hours. Patrick can dig the same hole in 6 hours. Write an equation that represents the number of holes they can dig if they work together. Sketch a graph of the equation. Find the point that solution that represents the amount of time it takes to dig one hole.