Solve the inequality. Then graph the solution set. (Sign chart method)

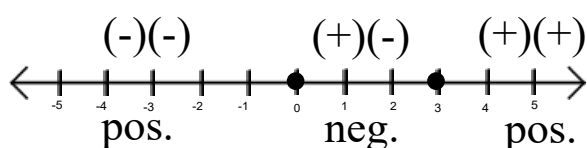$$3x^2 - 9x \geq 0$$ 1) Set equation equal to 0.

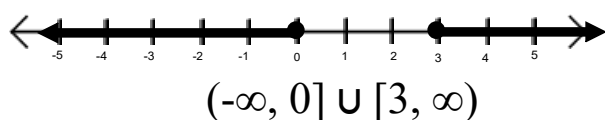$$3x(x - 3) \geq 0$$ 2) Factor

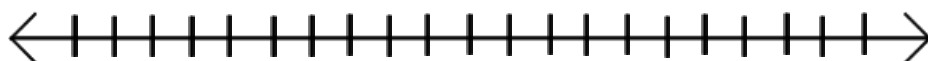$$x = 0 \text{ and } x = 3$$ 3) Find the zeros

(-)(-)   (+)(-)   (+)(+)   4) Graph on number line

pos.   neg.   pos.

5) Test values with sign chart

6) Write solution set

$$(-\infty, 0] \cup [3, \infty)$$

Solve the inequality. Then graph the solution set. (Sign chart method)

$$x^2 \leq 25$$
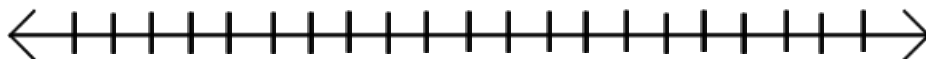
Solve the inequality. Then graph the solution set. (Sign chart method)
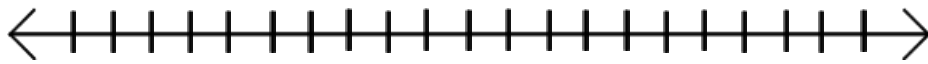
$(x - 3)^2 > 1$

Solve the inequality. Then graph the solution set. (Sign chart method)
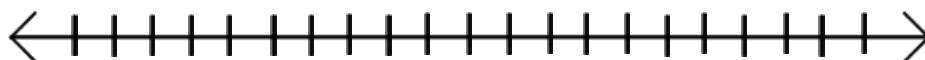
$-2x^2 + 6x \leq -15$

Solve the inequality. Then graph the solution set. (Sign chart method)

$x^3 + 2x^2 - 4x < 8$

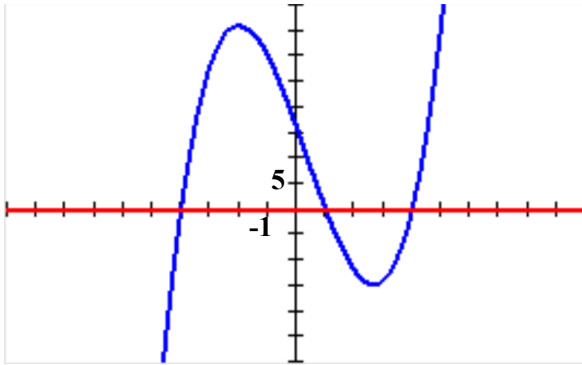Solve the inequality. Then graph the solution set. (Sign chart method)
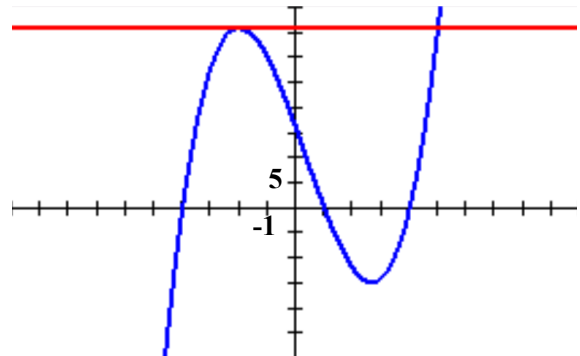
$x^2 + 3x + 8 > 0$

Use a graphing calculator to graph the equation. Use the graph to approximate the values of x that satisfy each inequality.
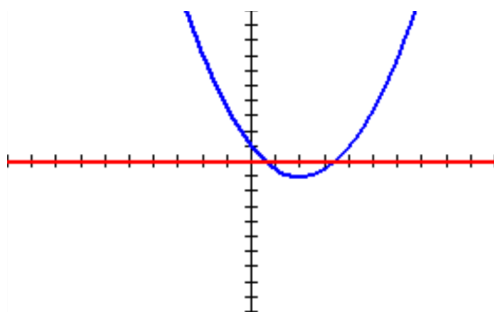
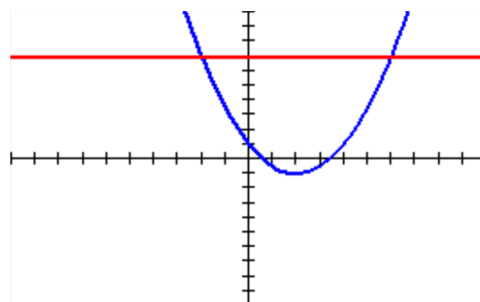$$y = x^3 - x^2 - 16x + 16$$

a) $y \leq 0$

b) $y \geq 36$

Use a graphing calculator to graph the equation. Use the graph to approximate the values of x that satisfy each inequality.

$$y = \tfrac{1}{2}x^2 - 2x + 1$$

a) $y \leq 0$

b) $y \geq 7$

Section 2.7A

Pg. 185-187: #13-39 odd, 53, 55