





Bellwork:

Solve using the quadratic formula:

$$6 - 2t^2 = 9t + 15$$

Chapter 4.9: Graph and Solve Quadratic Inequalities

recall:

$<$	\circ	
$>$	\circ	
\leq	\bullet	
\geq	\bullet	

ex. graph by hand

$$y > x^2 + 3x - 4$$

ex. A manila rope used for rappelling down a cliff can safely support a weight (W) provided $W \leq 480d^2$ where c is the rope's diameter (in inches). graph the inequality.

Solve:
$$\begin{cases} 4x + y = 8 \\ 2x - 3y = 18 \end{cases}$$

- what do(es) the solution(s) describe?

$$\begin{cases} y = -2x + 4 \\ 2x + y = 1 \end{cases} \quad \begin{cases} 4x - 3y = 8 \\ y = -2x^2 + 4x + 2 \end{cases}$$

Graph the system of quadratic inequalities.

$$\begin{aligned} y &\leq -x^2 + 4 \\ y &> x^2 - 2x - 3 \end{aligned}$$

What is a solution?

Solve by graphing: $2x^2 + x - 4 \geq 0$

solve by factoring: $x^2 + x \leq 6$

ex. Solve: $x^2 - 2x > 15$

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3-5, 6-16e, 21,24,35-40,44,45