

Graphing Quadratic Equations with 2 roots  
L15  
Springboard 7.4

Warm-up

- 1) factor  $2x^2 + 3x - 9$
- 2) factor  $x^2 - 12x + 27$

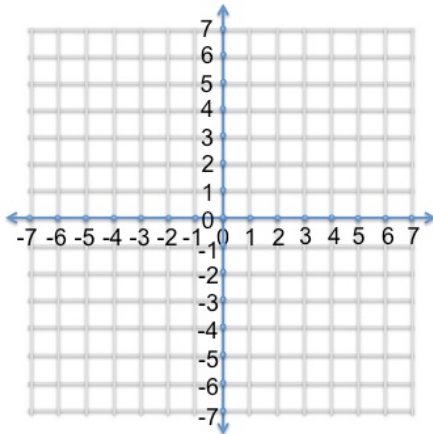
Find the roots and max/min point.

Given  $ax^2 + bx + c = 0$

Factor to find roots.
Find vertex. $x = -\frac{b}{2a}$
Plug in x to solve for y.
Connect points

I do  
 $y < 2x^2 + 3x - 9$

Factor to find roots.
Find vertex. $x = -\frac{b}{2a}$
Plug in x to solve for y.
Connect points



We do:

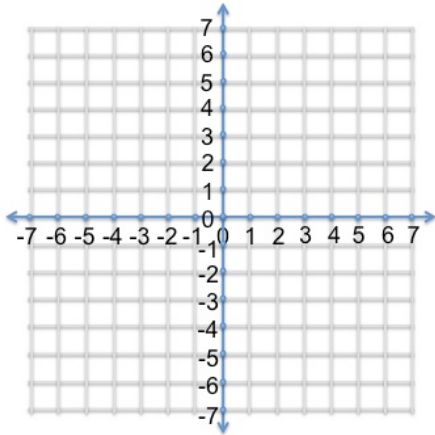
Graph  $y \geq x^2 - 12x + 27$

Factor to find roots.

Find vertex.  $x = -\frac{b}{2a}$

Plug in x to solve for y.

Connect points



We do:

Graph  $y \geq x^2 + 12x + 6$

Factor to find roots.

Find vertex.  $x = -\frac{b}{2a}$

Plug in x to solve for y.

Connect points

