

9.3 Solving Quadratic Equations by Graphing

Warm up

Solve for x.

$$x^2 - 3x - 4 = 0$$

$$(x-4)(x+1) = 0$$

~~-4~~  
~~-4~~ 1  
~~3~~

$$x-4=0 \text{ or } x+1=0$$

+4    4            -1    -1

$$x=4 \text{ or } -1$$

Nov 30-12:48 PM

Another way to solve quadratic equations.

1. Make sure equation is in standard form ( $ax^2 + bx + c = 0$ )
2. Go to [y =] and type equation. [graph]
3. Find x-intercepts ([2nd] [trace] #2)

Solve for x.  $x^2 - 3x - 4 = 0$

$$x = -1 \text{ or } 4$$

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Solve for x.

$$x^2 + 6x + 8 = 0$$

$$(x+2)(x+4) = 0$$

$$x = -2 \text{ or } -4$$

~~8~~  
~~2~~ 4  
~~6~~

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Solve for x.

$$x^2 - 6x + 9 = 0$$

$$(x-3)(x-3) = 0$$

$$x = 3$$

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Solve for x.

$$x^2 + x = -1$$

+1    +1

$$x^2 + x + 1 = 0$$

$$\text{no solution}$$

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Find the zeros.

$$f(x) = 2x^2 - 15x + 18$$

$$(x - \frac{12}{2})(x - \frac{3}{2}) = 0$$

~~36~~  
~~-12~~ -3  
~~-15~~

$$x = 6 \text{ or } 1.5$$

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Solve for x.

$$x^2 + 49 = -14x$$

$$+14x \quad +14x$$

$$x^2 + 14x + 49 = 0$$

$$(x+7)(x+7) = 0$$

$$x = -7$$

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Find the zeros.

$$f(x) = 4x^2 - 21x - 18$$

$$x = -.75 \text{ or } 6$$

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Classwork: p.589 #4 - 36 even

**Final Five**Find the zeros.  $2x^2 - 13x - 7 = f(x)$ 

Nov 30-1:07 PM