Bell Work

1. Find the zeros for $f(x) = 4x^2 + 4x - 120$.

Use the function below for #2 and #3.

$$f(x) = -(x+1)^2 - 6$$

2. What is the axis of symmetry?
3. What is the vertex of the parabola?
4. What is the domain in set notation for the quadratic parent functions?

Find the zeros of this function.

$$f(x) = 2x^2 + 13x + 15$$

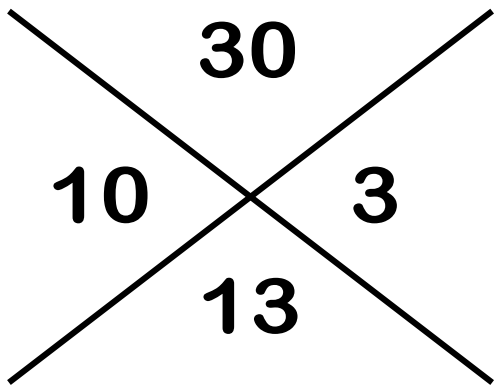
$$\underset{a}{2}x^2 + \underset{b}{13}x + \underset{c}{15} = 0$$

$$(2x^2 + 10x) + (3x + 15) = 0$$

$$2x(x + 5) + 3(x + 5) = 0$$

$$(2x + 3)(x + 5) = 0$$

$$x = -\frac{3}{2}, -5$$



1. Set the function = 0.
2. Play the X-Game.
   $a \times c$ on top, b on bottom.
   What 2 numbers multiply to get the top and add up to the bottom?
3. Substitute the 2 new numbers for the middle number.
4. Parenthesis around the 1st 2 and 2nd 2 numbers.
5. Factor out a GCF of each set.
6. One answer will be inside and one answer will be outside.
7. Solve.

Find the zeros of this function.

$$f(x) = 3x^2 - 2x - 8$$

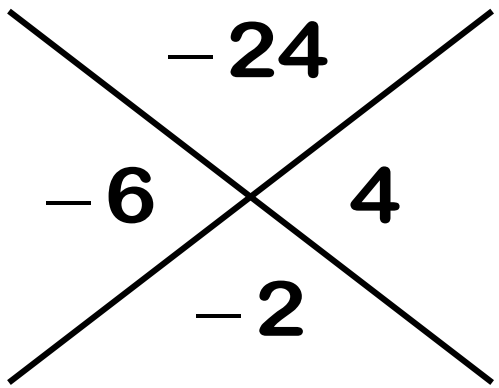
$$\begin{matrix} a & b & c \\ 3x^2 & -2x & -8 = 0 \end{matrix}$$

$$(3x^2 - 6x) + (4x - 8) = 0$$

$$3x(x - 2) + 4(x - 2) = 0$$

$$(3x - 2)(x - 2) = 0$$

$$x = \frac{2}{3},\ 2$$



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Find the zeros of this function.

$$f(x) = 6x^2 - 11x + 4$$

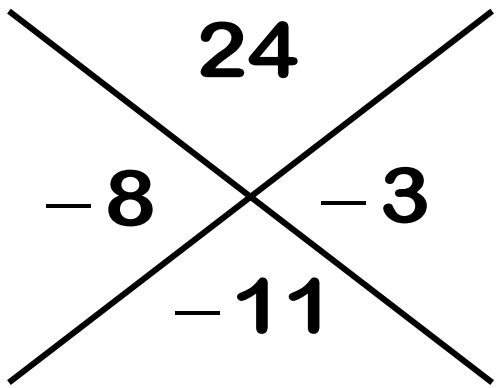
$$\begin{matrix} a & b & c \\ 6x^2 & -11x & +4 = 0 \end{matrix}$$

$$(6x^2 - 8x) + (-3x + 4) = 0$$

$$2x(3x - 4) - 1(3x - 4) = 0$$

$$(3x - 4)(2x - 1) = 0$$

$$x = \frac{4}{3}, \frac{1}{2}$$



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Find the zeros of this function.

$$f(x) = 6x^2 + 25x + 25$$

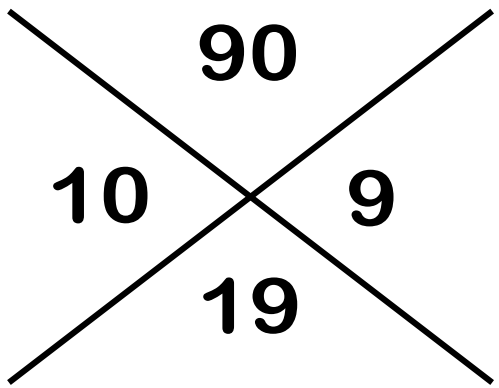
$$\underset{a}{6}x^2 + \underset{b}{19}x + \underset{c}{15} = 0$$

$$(6x^2 + 10x) + (9x + 15) = 0$$

$$2x(3x + 5) + 3(3x + 5) = 0$$

$$(3x + 5)(2x + 3) = 0$$

$$x = -\frac{5}{3}, -\frac{5}{2}$$



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Find the zeros of this function.

$$f(x) = -8x^2 + 98$$

$$\frac{-8x^2}{-2} + \frac{98}{-2} = 0$$

$$4x^2 - 49 = 0$$

$$(2x + 7)(2x - 7) = 0$$

$$x = -\frac{7}{2}, \frac{7}{2}$$

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Solving Quadratics by Factoring with the X-Game

1. Set the function = 0.
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Assignment:

Finding Roots of Quadratic Functions with the X-Game A Worksheet