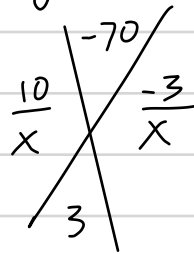


12/11/12 Writing Quadratic Equations

Solve by factoring:  $x^2 + 3x - 70 = 0$



$$(x+10)(x-3) = 0$$

$$x = -10, 3$$

you take the opposite of each factor for your solution.

Write a quadratic in standard form with the given roots.

Example

1

$$x = 4, -8$$

$$(x-4)(x+8) = 0$$

$$x^2 + 4x - 32 = 0$$

	$x$	$-4$
$x$	$x^2$	$-4x$
$8$	$8x$	$-32$
	$x^2 + 4x - 32$	

1 Take the opposite of solutions for your factors

2 multiply. 2

$$x = 3, -5$$

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

$$x^2 + 2x - 15 = 0$$

$$3 \quad x = 12, 6$$

$$(x-12)(x-6) = 0$$

$$x^2 - 18x + 36 = 0$$

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

$$2(x - \frac{1}{2})(x-3) = 0$$

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

$$2x^2 - 7x + 3 = 0$$

$$5 \quad x = \frac{3}{2}, -1$$

$$2(x - \frac{3}{2})(x+1) = 0$$

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

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

$$6 \quad x = -\frac{1}{5}, \frac{2}{3}$$

$$(x + \frac{1}{5})(x - \frac{2}{3}) = 0$$

$$5(x + \frac{1}{5}) \cdot 3(x - \frac{2}{3}) = 0$$

$$(5x+1)(3x-2) = 0$$

$$15x^2 - 8x - 2 = 0$$

When you have fractions just mult. each factor by the denominator involved.