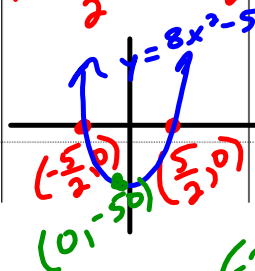
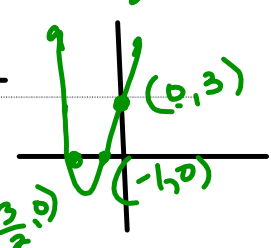


SOLVING QUADRATIC EQUATIONS BY FACTORING

PROCEDURE	EXAMPLE #1	EXAMPLE #2	EXAMPLE #3	EXAMPLE #4
<p>*</p> <p>STEP 1: Get all terms on Left, Zero on Right</p> <p>(No Negative "x² terms)</p>	<p>Solve the equation: $x^2 - 7x = -10$ $+10 +10$ $x^2 - 7x + 10 = 0$ $(x-2)(x-5) = 0$ $x-2=0$ $x-5=0$ $x=2$ $x=5$</p>	<p>Solve the equation: $x^2 = -4x$ $+4x +4x$ $x^2 + 4x = 0$ $x(x+4) = 0$ $x=0$ $x+4=0$ $x=-4$</p>	<p>Solve the equation: $8x^2 + 7 = 57$ $-57 -57$ $\frac{8x^2 - 50}{2} = \frac{0}{2}$ $4x^2 - 25 = 0$ $(2x-5)(2x+5) = 0$</p>	<p>Solve the equation: $2x^2 + 5x = -3$ $+3 +3$ $2x^2 + 5x + 3 = 0$ $2x^2 + 3x + 2x + 3 = 0$ $x(2x+3) + 1(2x+3) = 0$ $(2x+3)(x+1) = 0$ $2x+3=0$ $x+1=0$ $x=-\frac{3}{2}$ $x=-1$</p>
<p>STEP 2: Factor Left hand Side</p>				
<p>STEP 3: Set Each Factor equal to zero.</p>				
<p>STEP 4: Solve each equation you just made</p>				

(22)

$$2x^2 - 12x + 6 = 0$$

$$\frac{2x^2}{2} - \frac{12x}{2} = -\frac{6}{2}$$

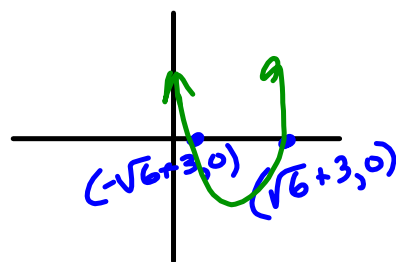
$$x^2 - 6x + 9 = -3 + 9$$

$$\left(\frac{-b}{2}\right)^2 = (-3)^2 = 9$$

$$\sqrt{(x-3)^2} = \pm\sqrt{6}$$

$$x - 3 = \pm\sqrt{6}$$

$$x = \pm\sqrt{6} + 3$$



Solve the following quadratic equations for x:

(1) $3x^2 = 9x$

(2) $18x^2 + 6 = 104$

(3) $5x^3 - 5x^2 = 100x$

(4) $3x^2 + 2x = 5$