

November 6, 2015

$$\frac{ax^2 + bx + c}{a} = \frac{0}{a}$$

$$x^2 + \frac{b}{a}x + \frac{c}{a} = 0$$

$$x^2 + \frac{b}{a}x = -\frac{c}{a}$$

$\odot \frac{b}{a} \cdot \frac{1}{2} = \frac{b^2}{4a^2}$   
 $\odot \left(\frac{b}{2a}\right)^2 = \frac{b^2}{4a^2}$  *add to both sides*

$$x^2 + \frac{b}{a}x + \frac{b^2}{4a^2} = -\frac{c}{a} + \frac{b^2}{4a^2}$$

*Perfect Square Trinomial*

$$\left(x + \frac{b}{2a}\right)^2 = \frac{-c(4a) + b^2}{4a^2}$$

$$\sqrt{\left(x + \frac{b}{2a}\right)^2} = \pm \sqrt{\frac{b^2 - 4ac}{4a^2}}$$

$$x + \frac{b}{2a} = \pm \sqrt{\frac{b^2 - 4ac}{4a^2}}$$

*Discriminant*

$$= \pm \frac{\sqrt{b^2 - 4ac}}{2a}$$

$$x = -\frac{b}{2a} \pm \frac{\sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Check!

Nov 6-9:51 AM

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

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$a(\quad)^2 + b(\quad) + c = 0$$

Nov 6-10:19 AM