

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

$$a \left( x^2 + \frac{b}{a}x + \frac{c}{a} \right) = 0$$

$$\left( x + \frac{b}{2a} \right)^2 - \frac{b^2}{4a^2} + \frac{c}{a} = 0$$

$$\left( x + \frac{b}{2a} \right)^2 - \frac{b^2 - 4ac}{4a^2} = 0$$

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

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