

# Solve Quadratic Equation: Quadratic Formula

$$\underline{\quad} X^2 + \underline{\quad} X + \underline{\quad} = 0$$

$$X = \frac{-\underline{\quad} \pm \sqrt{\underline{\quad}^2 - 4 \cdot \underline{\quad} \cdot \underline{\quad}}}{2 \cdot \underline{\quad}}$$

$$X = \frac{-\underline{\quad} \pm \sqrt{\underline{\quad} - \underline{\quad}}}{\underline{\quad}}$$

$$X = \frac{-\underline{\quad} + \sqrt{\underline{\quad}}}{\underline{\quad}} \text{ or } \frac{-\underline{\quad} - \sqrt{\underline{\quad}}}{\underline{\quad}}$$

See next page for assistance in identifying solution types.

If  $b^2 - 4ac$  in  $\sqrt{b^2 - 4ac}$  is a perfect square, the final solution will be two rational numbers.

If  $b^2 - 4ac$  in  $\sqrt{b^2 - 4ac}$  is not a perfect square, the final solution will be two irrational numbers.

If  $b^2 - 4ac$  is negative, the final answer is “no real solution”.

If  $b^2 - 4ac$  equals 0, the final solution will be one rational number.