

# Determinants: Identifying Type of Solution For Quadratic Equation Equal to Zero

$$\square X^2 + \bigcirc X + \triangle = 0$$

$$\text{Determinant} = \bigcirc^2 - 4 \cdot \square \cdot \triangle$$

If positive (+) & a perfect square, the solution is two rational numbers.

If positive (+) & not a perfect square, the solution is two irrational numbers.

If negative (-), there are no real number solutions.

If equal to 0, there is one rational number solution.