



To solve quadratic equation in the following form:

$$Ax^2 + Bx + C = 0$$

begin with evaluation of the discriminant:

$$\Delta = B^2 - 4 \cdot A \cdot C$$

If the discriminant is positive then the equation has two solutions:

$$x_1 = \frac{-B - \sqrt{\Delta}}{2 \cdot A}$$

$$x_2 = \frac{-B + \sqrt{\Delta}}{2 \cdot A}$$

If the discriminant is zero then the equation has one solution:

$$x_0 = \frac{-B}{2 \cdot A}$$

If the discriminant is negative then the equation has no solutions.

$$x \in \emptyset$$