

Chapter 04

QUADRATIC EQUATIONS

Roots of Quadratic Equation:

The roots of $ax^2 + bx + c = 0$, $a \neq 0$ are

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

This is also called (Sridharacharya's Rule).

$$\text{i.e., root}(\alpha) = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \text{ and}$$

$$\text{root}(\beta) = \frac{-b - \sqrt{b^2 - 4ac}}{2a}.$$

Discriminant:

$b^2 - 4ac$ is called a discriminant. It is denoted by ' Δ ' or ' D '.

$$\therefore \Delta \text{ (or) } D = b^2 - 4ac.$$