PANKAJ
Page No.:
Date : / /

Chapter → 2 → Equation

① Linear eqⁿ → (one variable)
Highest power = 1
$ax + b = c \rightarrow 3x + 5 = 10$

② Linear eqⁿ → [two variable]
Highest power = 2
$ax + by = c \rightarrow 3x + 4y = 10$

③ Quadratic eqⁿ :-
Highest Power → 2
$ax^2 + bx + c = 0 \rightarrow 2x^2 + 5x + 12 = 0$

④ Cubic eqⁿ :-
Highest power → 3
$ax^3 + bx^2 + cx + d = 0 \rightarrow 2x^3 + 8x^2 + 12x + 3 = 0$

⑤ Polynomial eqⁿ :-
Highest power more than 3

$$\text{Quadratic eq}^n = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

rect. Perimeter = $2[l + B]$
rect Area = $L \times B$

roots are reciprocal → $\alpha = a$

PANKAJ
Page No.:
Date : / /

Properties :-

$$\alpha + \beta = \frac{-b}{a} \quad , \quad \alpha\beta = \frac{c}{a}$$

$$\alpha^2 + \beta^2 = (\alpha+\beta)^2 - 2\alpha\beta$$
$$(\alpha-\beta)^2 = \alpha^2 + \beta^2 - 2\alpha\beta$$
$$\alpha^3 + \beta^3 = (\alpha+\beta)(\alpha^2 - \alpha\beta + \beta^2)$$
$$\alpha^3 - \beta^3 = (\alpha-\beta)(\alpha^2 + \alpha\beta + \beta^2)$$

$$(x-\alpha)(x-\beta) = 0$$
$$x^2 - (\alpha-\beta)x + \alpha\cdot\beta = 0$$

$$\alpha - \beta = \sqrt{(\alpha^2+\beta^2) - 2\alpha\beta}$$

degree → Highest power.

no. → 37 digits → 3 and 7.

divisor ← 2) 5 (2 → Quotient
4
dividend 1 → reminder

Profit = Sale - Cost
Loss = Cost - SalePrice.

$x^2 = \pm a$

mean prop^n $= \sqrt{xy}$