

Tender Heart High School, Sec.-3313 chd.

class: VIII

Teacher: Deepa

Subject: Mathematics

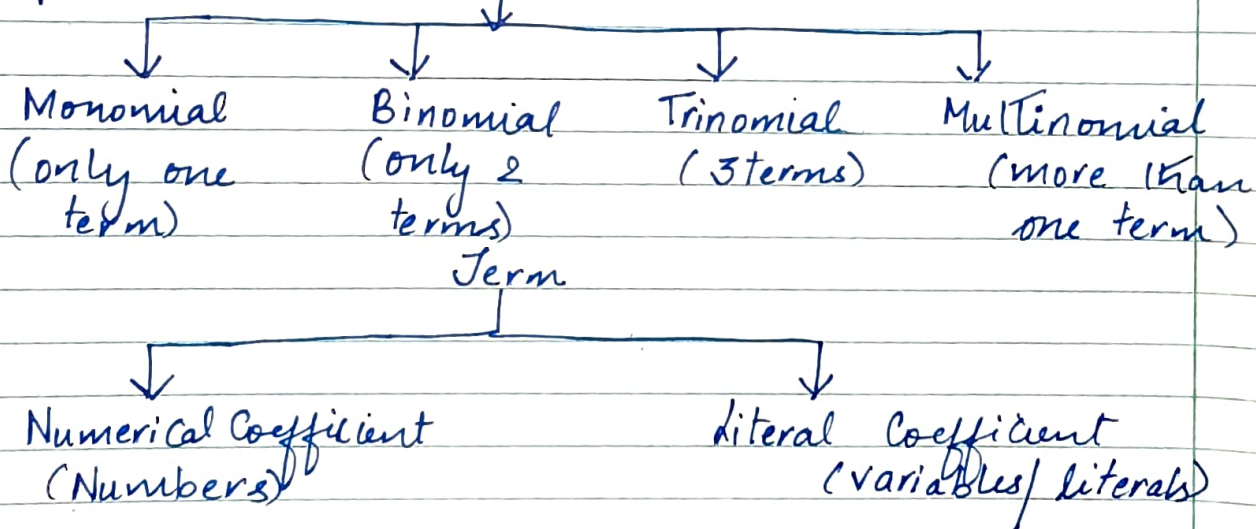
Topic: Chapter-12: Fundamental concepts of Algebraic expressions.

The basic concept of the chapter will be done in the class.

Variable: All the alphabets in the given expression are called variables.

Constant: A symbol having a fixed value is called a constant.

Algebraic expression: It is a combination of constants and variables, connected by operations $+$, $-$, $\times$ and $\div$.



Polynomial: An expression is said to be polynomial if it involve only positive integral power.

Linear: A polynomial of degree 1.

Quadratic: A polynomial of degree 2.

Cubic: A polynomial of degree 3.

Exercise -12A

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Ans-3 Term = $-\frac{3}{5} x^3 y^2 z$,

(i) Coeff. of $x^2 = -\frac{3}{5} x y^2 z$

(ii) Coeff. of $-y z = \frac{3}{5} x^3 y$

(iii) Coeff. of $\frac{3}{5} x y z = -x^2 y$

(iv) Coeff. of $-x^2 y = \frac{3}{5} x y z$

Ans 10 $x = 4$, $y = 3$, $z = -2$

(i) $x^2 + y^2 + z^2 + 2xyz = (4)^2 + (3)^2 + (-2)^2 + 2 \times 4 \times 3 \times (-2)$
 $= 16 + 9 + 4 - 48$
 $= 29 - 48 = -19$

Now, for Exercise - 12 B, add and subtract the given expressions.

To add two given expressions, we need to add the like terms, and only numerical coefficients are added or subtracted.

Soln-3 Add

$$\begin{array}{r} \text{v)} \quad 1 - x - x^2 - 3x^3 \\ + 3 \quad \quad 2x^2 + x^3 \\ - 2 + 5x + 2x^2 \\ - 3x - x^2 + x^3 \\ \hline 2 + 1x + 1x^2 - x^3 \end{array}$$

Ans = $-x^3 + x^2 + x + 2$

$$\begin{array}{r} \text{vii)} \quad 3 + 5y - 4y^2 + 7y^3 \\ - 7 + 2y \quad \quad + 3y^3 \\ 5 - 6y + 2y^2 - 9y^3 \\ \hline 1 + y - 2y^2 + y^3 \end{array}$$

Ans = $y^3 - 2y^2 + y + 1$

— x — x —