**CLASS-VII**

**CHAPTER-12 (ALGEBRAIC EXPRESSIONS)**

**GIST OF THE LESSON-**

* **HOW ARE EXPRESSIONS FORMED?-**ALGEBRAIC EXPRESSIONS ARE FORMED BY COMBINING VARIABLES AND CONSTANTS THROUGH THR OPERATION OF ADDITION,SUBTRACTON,MULTIPLICATION AND DIVISION.
* TERMS OF AN EXPRESSIONS
* LIKE AND UNLIKE TERMS
* MONOMIAL,BINOMIAL,TRINOMIAL AND POLYNOMIALS
* ADDITION AND SUBTRACTION OF ALGEBRAIC EXPRESSIONS
* FINDING THE VALUE OF AN EXPRESSIONS
* USING ALGEBRAIC EXPRESSIONS-FORMULAS AND RULES
1. PERIMETER FORMULAS
2. AREA FORMULAS
3. RULES FOR NUMBER PATTERN
* SOME MORE NUMBER PATTERNS
* PATTERN IN GEOMETRY

**QUESTIONS LEVEL WISE-**

**LEVEL-1**

Q1-Group the like terms together from the following:

12x, 12, -25x, -25, -25y, 1, x, 12y,y

Q2-Add and subtract

(i)m-n, m+n

(ii)mn+5-2, mn+3

Q3-Identify terms which contain x and give the coefficient of x.

(i)y2x+y

(ii)12xy2+25

(iii)1+x+xy

Q4-Which of the following pairs of terms is a pair of like terms?

(a)1,10

(b)y,-xy

(c)z2,z

(d)z2,8

Q5-Add 2xy,-4xy,8xy,-6xy

Q6Subtract (x-y) from (x+y)

Q7-Find the value of following expressions for x=3:

 x-3

**LEVEL-II**

Q1-What should be added to x2+y2 to get x2+y2+2xy?

Q2-Find the value of expression

100-10x3 for x=0

Q3-Simplify p+(p-q)+q+(q-p)

Q4-From the sum of 3x-y+11 and –y-11,subtract 3x-y-11

Q5-What should be subtracted from x2+y2-2xy to get x2+y2?

Q6-Find the value of expression a2-b2 for a=2,b=1

Q7-Simplify the expression and find its value when a=5 and b=-3

4(a2+b)+6-ab

Q8-Subtract x4-y4-x2y2 from 2x4-3x2y2+4y4

**LEVEL-III**

Q1-If the value of the expression x2-5x+k for x=0 is 5,then find the value of k.

Q2-Find the value of expression a3+b3+c3-3abc for a=2,b=3,c=4

Q3-From the sum of -4x+3x2+5 and 8x-3 subtract 4x2-5

Q4-Simplify the expressioins and find the value if y is equal to -4

7(-2+3y)+7y

Q5- What should be taken away from 7x2+2y2+6xy+10 to obtain –x2+6y2-4xy+6?

Q6-Subtract the sum of 3p-2q+2r,5p+3q-2r,-4p+2q-3r from the sum of 2p-3q-3r,4p-q-r,3p+2q-3r.

Q7-What must be subtracted from 2x2-xy+5y2 to make it -5x2-3xy-2y2?

**WORKSHEET**

1. Which of the following pair of term is a pair of like term:

(i)7p,8q (ii)10pq,-7pq (iii)12p2q2,-5p2 (iii)2405p,78qp

 2.Subtract –y2 from -5y2

3. Find the value of expression

 -x+2 for x=-1

4.Add 4x2y,-3x2y,-7xy2,7xy2

5.What is the coefficient of x and y in the expression

 4x+3y