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Subject- Maths 2
Chapter 11.2
Class -6
Book- Visualising mathematics

Algebraic expression

A collection of constants and literals connected by one or more signs of operations. (+,-,x,÷) is called an algebraic expression!!!!

4x+5 is an algebraic expression which contains a variable x

similarly, 3 - 5 is an algebraic expression which contains the variable t

Algebraic expression

5x

Number of terms 1
Terms-5x

X+5y
Number of terms=2
Terms=x,5y

3x-2y
Number of terms 2
Terms=3x,-2y

X+12y+7

Number of terms 3
Terms=x,12y,7

Coefficients
In the product of numbers and literals any of the factors is called the coefficients of the product of other factors.
For example in the term 6x ,6 is the numerical coefficient of x
X is the literal coefficient of 6.

Like terms and unlike terms

Two or more terms having the same variables are called like terms. Two or more terms with different variables are called unlike terms.

For example: 6m, - 7m, and m are like terms.
10 y,10x and -5t are unlike terms

Power of literal
When a quantity is multiplied by itself, any number of times, the product is called a power of that quantity. If a literal X is multiplied 4 x itself then it is written as
$X \times X \times X \times X = X^4$

$Y \times Y \times Y = Y^3$

$Z \times Z \times Z \times Z \times Z = Z^5$
In x^4, x is called the base and 4 is called the power|

Exercise 11.2

Q1, Write the numerical coefficient of each term of the following algebraic expression:

a.$5x^3-7x^2+11$
Ans-5, -7, 11

b.$6x^4+5x^3-2x+7$
Ans-6,5, -2,7

c.$4a^3-5b^3+2c^3-6abc$
Ans-4,-5,2,_6

d.$7y^2-8xy$

Ans-7,-8

Q2. Write down the terms of following algebraic expression.

a. 2x - 3y
Ans 2x, -3y

b.ax^2-bx-c

Ans ax^2, -bx, -ç

c. 2a - 3 + 4c
Ans 2a,-3,+4c

d. p^2q-pq+9

Ans p^2q,-pq,9

Q3. Write down the coefficient of X in each of the following.
a.$6x^3$-$5x^2$+8x

Ans 8

b. 2 x^2y+4xy+$6y^2$
Ans 4y

c.-3xy+$4x^2$+6

Ans 3y

D
d.x^2-5/2+6
Ans -5/2

Q4. Evaluate the following;

a, 2a+3b-c if a=3,b=-4, ç=-2

2 x 3+3x(-4) -(-2)
=6-12+2
=8-12
=-4 And

b. a^3+b^3+$ç^3$-3abc
If a=-1,b=2,ç=3
$(-1)^3$+2^3+3^3-3(-1)x2x3
=-1+8+27+18
=-1+53

=52 And

c.à³+b³+3ab²+3a²b
If a=2,b=-3

2²+(-3)³+3x2x(-3)²+3x2²x(-3)
8-27+54-36
8+54+37-36
62-63
-1 Ans

Qd. 5+a²+ab-9c
If a=5, b=4, c=0
5+5²+5x4-9x0

5+5x5+5x4-9x0

5+25+20-0
50 Ans

Q e. 6a³-5b²+2c²-3a²bc
If a=1, b=2 , c=-1

6x(1)³-5x(2)²+2x(-1)²-3x1²x2x(-1)
6x1-5x2x2+2x1-3x1x2x(-1)

6-20+2+6
6+6+2-2024-20
-6 Ans

Q5 . Identify the like terms in each of the following.

a. X² y ,x y², y²x, xy

Like terms are :xy², y²x

b. x²,y²,-3x²,y³,4x

Like terms are:x²,-3x²

c. 5a,6ab,-ac,⅓ca,

Like terms are: -ac,⅓ca

e. $4a^3b$, $6ab^3$, $4b^3a$, $6ab$

Like terms are: $6ab^3$, $4b^3a$

Q6. Write down the algebraic expression whose terms are:

a 6,-3x

Ans 6-3x Ans.

b.2a,a^2,3ab,-4

Ans. $2a+a^2+3ab-4$

c. -5,$4x^2$,-7x
Ans $-5+4x^2-7x$

d.x^2, $2y^2$,-8

Ans: x^2+2y^2-8

e.a^2,$-3b^2$,$2c^2$,-9

Ans:$a^2-3b^2+2c^2-9$

Q7. Identify monomials binomials and trinomials from the following algebraic expression:

a .x+7
Binomials

b. -2abc
Monomials

c. X + 3y - 7
Trinomials

d. X $^2y^2$ - 7 x y^2 + 2 x^2y

Trinomials

e. $7x^3y$
Monomials

f.-11
Monomials

Q8.Write the degree of each of the following polynomials:
a.$x^2-4x^5+x^6$
(Highest power of x =6)
Ans 6

b.$a^3-3ab+7$
Ans (power of a =3(highest)$2xy^2$

c. -7
Ans 0(absent of variables)

d. $2xy^2+\frac{5}{6}x+\frac{1}{7}$

Ans here we will add power of
$2xy^2$
Power of x= 1
Power of y=2
Ans 1+2= 3

e. X
Ans 1

f. $1-x^3$

Ans. 3
