Ex-18(B)

1- Separate the constants and the variables from each of the following:

(i) $6, \frac{4}{y}, -3x, \frac{3}{4}, \frac{4}{5}xy^2, \frac{-2}{2}y^2$

(ii) $6, \frac{4}{y}, -3x, \frac{4}{5}, \frac{4}{5}xy, a^2, 7p^0, \frac{9x^3}{y}, \frac{-x^2}{4x}, \frac{-x}{3y}$

2- Group the like terms together:

(i) $9x, -3y, x, \frac{2}{3}x, \frac{4}{5}y$ and y.

(ii) $4x, -x, \frac{2}{3}x$ and $-3y, \frac{4}{5}y, y$

(iii) $\frac{2}{3}xy, -4xy, 2y^2, \frac{-2}{3}y^2, \frac{2y}{3}$ and yx.

$\frac{2}{3}xy, 4yx, yx$ and $2y^2$

(iv) $-ab^2, 6a^2, 7b^2a, -3a^2b$

$ab^2, 7b^2a, 2ab^2$ and $b^2a, \frac{-3}{5}a^2b^2$

(v) $5ax, -5by, \frac{6y}{7}, 7xa$ and $\frac{2ar}{3}$.

$5ax, 7xa, \frac{2ar}{3}$ and $-5by, 6y$

2. State whether true or false

(i) 16 is a constant and y is a variable, but 16y is variable.

True

(ii) 5x has two terms 5 and x.

false

(iii) The expression 5+x has two terms 5 and x.

True

(iv) The expression $2x^2+x$ is a trinomial

false

(v) ax^2+bx+c is a trinomial,

True

(vi) 8x ab is a bino

false

(vii) 4+ab is a binomial

v. True

(viii) $x^3 - 5xy + 6x + 7$, is a polynomial.

True

(ix) $x^2 - 5xy + 6x + 7$ is a multinomial

v. True

(x) The coefficient of x in $5x$ is 5.

False

(xi) The coefficients of ab in $-ab$ is -1

True

(xii) The coefficient of xy in $3xy$ is 3

False

4. State the number of terms in each of the following expressions:

(i) $2ab$

1

(ii) $3xx + \frac{a}{2}$

. 2

(iii) $3x \div \frac{x}{2}$

2.

(iv) $a \div x \times b + c$

. 2

(v) $3x \div 2 + y + 4$

. 3

(vi) $xy \div 2$

. 1

(vii) $x + y \div a$

. 2

(viii) $2x + y + 8 \div y$

2

(ix) $2x \cdot a + 3 \div 1 + 4$

3

5- State weather true or false

(i) xy and $-yx$ are like terms.

A- True

(ii) x^2y and $-y^2x$ are like terms.

. False

(iii) a and $-a$ are like terms.

. True

(iv) $-ba$ and $2ab$ are unlike terms

. False

(v) $5a^2x$ are like terms,

. False

(vi) $3xy$ and $4xyz$ are unlike terms

true

6- For each expression given below, state weather it is a monomial, or a binomial or a trinomial

(i) xy

Monomial

(i) xyz

Binomial

(ii) $2x+y$

Monomial

(iii) $-a$

Monomial

(v) $ax^2 - x + 5$

Trinomial

(vi) $-3bc + d$

Binomial

(vii) $1 + x + y$

Trinomial

(viii) $1 + x \div y$

Binomial

(ix) $x + xy - y^2$

Trinomial

2 Write down the coefficient of x in the following monomials

(i) x

1

(ii) $-x$

-1

(iii) $-3x$

-3

(iv) $-5ax$

$-5a$

(v) $\frac{3}{2}xy$

$\frac{3}{2}y$

(vi) $\frac{ax}{y}$

$\frac{a}{y}$

8- Write the coefficients of:

(i) x in $-3xy^2$

$-3y^2$

(ii) x in $-ax$

$-a$

(iii) y in $-y$

-1

(iv) y in $\frac{2}{a}y$

$\frac{2}{a}$

(v) xy in $-2xyz$

$-2z$

(vi) ax in $-axy^2$

$-y^2$

(vii) x^2y in $-3ax^2y$

$-3a$

(viii) xy^2 in $5axy^2$

$5a$

1 State the numerical coefficients of the following monomials:

(i) $5xy$

5

(ii) abc

1

(iii) $5pqr$

5

(iv) $\frac{-2x}{y}$

-2

(v) $\frac{2}{3}xy^2$

$\frac{2}{3}$

(vi) $\frac{-15xy}{22}$

$\frac{15}{22}$

(vii) $-7x^2y$

-7

(viii) $\frac{-3x}{-3} \div (2y)$

10- Write the degree of each of the following polynomials:

(i) $x + y^2$

2

(ii) $5x^2 - 7x + 2$

2

(iii) $x^3 - y^8 + x^{10}$

10

(iv) $1 - 100y^{20}$

20

(v) $9 + 9x - 9x^3$

3

(vi) $8xy - 3y^2 + y^5$

7

(vii) $8x^3 - 8y^2z^3 + 7y^5$

6

(vii) $9y^2 \cdot 3x^3 + y^3x^7$

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