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Ex 18 (B)

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

$6, 4y, -3x, \frac{5}{4}, \frac{4}{5}xy, a2, 7p, 0, \frac{9x}{4}, \frac{3}{4x}, \frac{xz}{3y}$

Ans- Constants- $6, 4, -3, \frac{5}{4}, \frac{4}{5}, 7, 0, \frac{9}{4}, \frac{3}{4}, \frac{2}{3}$

Variable- $y, x, xy, a2, p, x, x, xy$

2) Group the like terms together:

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

Ans- $4x, -x, \frac{2}{3}x$ ... $\frac{4}{5}y, y, -3y$

ii) $\frac{2}{3}xy, -4yx, 2yz, \frac{-2}{3}yz, \frac{zy}{3}$ and yx

Ans- $\frac{2}{3}xy, -4yx, yx$. $2yz, \frac{-2}{3}yz, \frac{zy}{3}$

iii) $-ab^2, b^2a^2, 7b^2a, -3a^2b^2$

Ans- $-ab^2, b^2a^2, 7b^2a, -3a^2b^2$

iv) $5ax, -5by, \frac{by}{7}, 7x a$ and $\frac{2ax}{3}$

Ans- $5ax, 7xa, \frac{2ax}{3}$ $-5by, \frac{by}{7}$

3) state whether true or false.

i) 16 is a constant and y is a variable, but 16y is variable. ~~False~~ True

ii) 5x has two terms 5 and x. ~~True~~ 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) $8^{x}ab$ is a binomial. ~~True~~ false

vii) 8 tab is a binomial. True

viii) $x3 - 5xy + 6x + 7$ is a polynomial. True

ix) $x^3 - 5xy + 6x + 7$ is a multinomial. True

x) The ~~coef~~ coefficient of y^{2e} in $-3xy$ is

$5x$ is $5x$. False

xi) The coefficient of ab in $-ab$ is -1.
True

xii) The coefficient of y in $-3xy$ is -3. True

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

i) $2a - b$

Ans 2

ii) $3 \times x + \frac{a}{2}$

Ans 2

iii) $3x - \frac{x}{p}$

Ans 2

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

Ans 2

iv) $3x \div 2 + y + 4$

Ans- 3

v) $xy \div 2$

Ans- 1

vii) $x + y \div a$

Ans- 2

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

Ans- 3

ix) $2 \times a + 3 \div b + 4$

Ans- 3

5) State whether true or false.

i) xy and -yx are like terms. 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) 5 and 5x are like terms. False

vi) 3xy and 4xyz are unlike terms. True

~~vii)~~

6) For each expression given below, state whether it is a monomial, or a binomial or trinomial.

i) xy - monomial

ii) xy + x - binomial

iii) 2x ÷ y - monomial

iv) -a - monomial

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

vi) -3bc + d - binomial

~~vii) 1 + x + y - Trinomial~~ Binomial

~~viii) xy^2 in 5a - 1.~~

vii) 1 + x + y - Trinomial

viii) 1 + x ÷ y - Binomial

ix) $x + xy - xy^2$ · Trinomial

7) Write down the coefficient of x in the following monomials:

i) $x = 1$

ii) ~~x in~~ $-x = -1$

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: ~~the following monomial~~:

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) a or x in $-axy^2 = -y^2$

vii) x^2y in $-3ax^2y = -3a$

viii) xy^2 in $5axy^2 = 5a$

q) state the numerical co-efficients 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) $\frac{-15xy}{22} = \frac{-15}{2}$

vii) $-7x \div y = -7$

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

10) Write degree of each of the following polynomials:

i) $x + x^2 = 2$

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

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

iv) $1 - 100x^{20} = 20$

v) $4 + 4x - 4x^3 = 3$

vi) $8x^2y - 3y^2 + x^2y^5 = 7$

vii) $8z^3 - 8y^2z^3 + 7yz^5 = 6$

viii) $4y^2 - 3x^3 + y^2x^7 = 9$