H.W

Exercise 18(B)

1. Constants - $6, \frac{5}{4}, 0$

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

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

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

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

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

3. i) 16 is a constant and y is a variable, but 16y is variable - 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) $8xab$ is a binomial. False

vii) $8+ab$ is a binomial. True

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

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

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

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

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

4. i) In the expression $2a - b$ there are two terms.

ii) In the expression $3x + \frac{a}{2}$ there are two terms.

iii) In the expression $3x - \frac{x}{p}$ there are two terms.

iv) In the expression $a \div x \times b + c$ there are two terms.

v) In the expression $3x \div 2 + y + 4$ there are three terms.

vi) In the expression $xy \div 2$ there is one term.

vii) In the expression $x + y \div a$ there ~~is~~ are two terms.

viii) In the expression $2x + y + 8 \div y$ there are three terms.

ix) In the expression $2 \times a + 3 \div b + 4$ there are three terms.

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

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

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

iv) $-8a$ and $2ab$ are like unlike terms.

v) 5 and $5x$ are like terms.

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

6. i) xy - Monomial

ii) $xy + x$ - Binomial

iii) $2x \div y$ - Monomial

iv) $-a$ - Monomial

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

vi) $-3bc + d$ - Binomial

vii) $1 + xy$ - Trinomial

viii) $1 + x \div y$ - Binomial

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

7. i) Coefficient of $x = 1$

ii) Coefficient of $x = -1$

iii) Coefficient of $x = -3$

iv) Coefficient of $x = -5a$

v) $\frac{3}{2}y$ Coefficient of $x = \frac{3}{2}$

vi) $\frac{a}{y}$ Coefficient of $x = \frac{a}{y}$

8.i) Coefficient of x in $3xy^2 = 3y^2$

ii) Coefficient of x in $ax = a$

iii) Coefficient of y in $-y = -1$

iv) Coefficient of y in $\frac{2}{a}y = \frac{2}{a}$

v) Coefficient of xy in $-2xyz = -2z$

vi) Coefficient of ax in $axy^2 = y^2$

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

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

9.i) Numeral coefficient of $5xy = 5$

ii) Numeral coefficient of $abc = 1$

iii) Numeral coefficient of $5pqr = 5$

iv) Numeral coefficient of $\frac{-2x}{y} = -2$

v) Numeral coefficient of $\frac{2}{3}xy^2 = \frac{2}{3}$

vi) Numeral coefficient of $\frac{-15xy}{2z} = \frac{-15}{2}$

vii) Numeral coefficient of $-7x \div y$ is -7

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

10. i) Degree of polynomial $x + x^2 = 2$

ii) Degree of polynomial $5x^2 - 7x + 2 = 2$

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

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

v) Degree of polynomial $4 + 4x - 4x^3 = 3$

vi) Degree of polynomial $8x^2y - 3y^2 + x^2y^2 = 7$

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

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