

Chapter 10:

Date: 08/08/24

- : Algebraic Expressions :-

WORKSHEET

I Choose the correct option :

(a) $2x^2y + 3 + 5xy^2 - 15 + 2y^2x$ is a —
(i) Monomial (ii) Binomial (iii) Polynomial (iv) Trinomial

(b) The co-efficient of $-xyz$ in the term $-1.8x^3y^2z^4$ is —
(i) $-1.8yz^4$ (ii) $1.8xyz^4$ (iii) $1.8xyz^3$ (iv) $-xyz^4$

(c) The degree of the polynomial $(-25x^2y^2z + 7p^3y + 29x^2yz^2p - 34)$ is —
(i) 5 (ii) 3 (iii) 4 (iv) 6

(d) The like term to $4a^3y^2z^3$ is —
(i) $y^2z^3a^2$ (ii) $4z^2a^3y^2$ (iii) $7z^3a^3y^2$ (iv) $4a^3y^2z^3$

(e) The value of $ax^2 + bx + c$ at $x = -\frac{b}{a}$ is —
(i) a (ii) $b^2 - 4ac$ (iii) 0 (iv) c

(f) Which of the following pair is a pair of like terms?

(i) $-7axy^2z$, $-7x^2yz$

(iii) $3xyz$, $3x^2y^2z^2$

(ii) $-10xyz^2$, $3yz^2x$

(iv) $4x^3y^4z^2$, $15z^3x^4y^2$

2] Simplify the following by combining the like terms and then write whether the expression is a monomial, a binomial or a trinomial.

i) $p^3q^2r + pq^2r^2 + 3p^2qr^2 - 9p^2qr^2$

ii) $50x^3 - 21x + 107 + 41x^3 - x + 1 - 93 + 71x - 31x^3$

3] Add the following expressions:

i) $a^2 + 3ab - bc$, $b^2 + 3bc - ca$ and $c^2 + 3ca - ab$

ii) $t - t^2 - t^3 - 14$; $15t^3 + 13 + 9t - 8t^2$; $12t^2 - 19 - 24t$ and $4t - 9t^2 + 19t^3$

iii) $7x^2yz^3 + 27$; $-34 + 9y^2 - 15x^2yz^3$; $16x^2 - 34y^2 + 15$; $y^2 + 27x^2yz^3 + 10$

4] Subtract the following expressions:

i) $11 - 15y^2$ from $y^3 - 15y^2 - y - 11$

ii) $x^3y^2 + 3x^2y^2 - 7xy^3$ from $x^4 + y^4 + 3x^2y^2 - xy^3$

iii) $-4x^2y - y^3$ from $x^3 + 3xy^2 - x^2y$

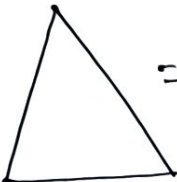
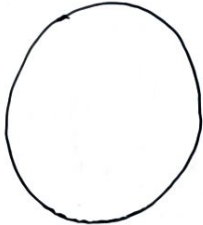
⑤ If $A = 3x^2 - 4x + 1$, $B = 5x^2 + 3x - 8$ and $C = 4x^2 - 7x + 3$, then find:

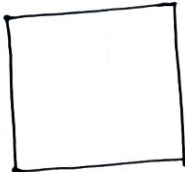
(i) $A - B + C$

(ii) $B + C - A$

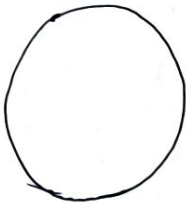
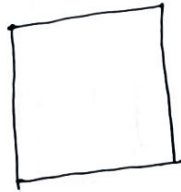
(iii) $A - (B + C)$

⑥ Each symbol given below represents an algebraic expression:

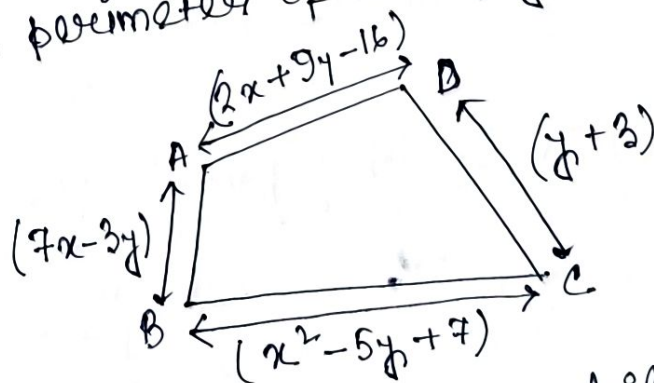
 $= 2x^2 + 3y$,  $= 5x^2 + 3x$,

 $= 8y^2 - 3x^2 + 2x + 3y$

Then, find the expression which is represented by the below symbols —

 $+$  $-$ 

⑦ Find the perimeter of the figure given below:



What will be the perimeter of the quadrilateral ABCD if the values are $x = 2$ and $y = 7$ respectively?