Subject: - Mathematics

PRACTICE PAPER

CBSE-7th

Topic: - Algebraic Expressions

1. Write the coefficient of x^2 in $-\frac{3}{2}ax^2 + yx$. **Ans. = $-\frac{3}{2}a$**

2. Write the constant term of $a^3 - 3a^2 + 7a + 5$ **Ans. = 5**

3. Evaluate given expression for $x = 1, y = -1, z = 2, a = -2, b = 1, c = -2$

a) $axy + byz + cxy$ **Ans. = 2**

4. Add $x^2 + 2xy + y^2$ top the sum of $x^2 - 3y^2$ and $2x^2 - y^2 + 9$ **Ans. = $4x^2 + 2xy - 3y^2 + 9$**

5. From $x^3 - 5x^2 + 3x + 1$, take away $6x^2 - 4x^3 + 5 + 3x$. **Ans. = $5x^3 - 11x^2 - 4$**

6. From the sum of $x^2 + 3y^2 - 6xy, 2x^2 - y^2 + 8xy, y^2 + 8$ and $x^2 - 3xy$, subtract $-3x^2 + 4y^2 - xy + x - y + 3$. **Ans. = $7x^2 - y^2 - x + y + 5$**

7. How much is $x^2 - 2xy + 3y^2$ less than $2x^2 - 3y^2 + xy$? **Ans. = $x^2 - 6y^2 + 3xy$**

8. How much does $a^2 - 3ab + 2b^2$ exceeds $2a^2 - 7ab + 9b^2$? **Ans. = $-a^2 + 4ab - 7b^2$**

9. If $P = 7x^2 + 5xy - 9y^2, Q = 4y^2 - 3x^2 - 6xy$ *and* $R = -4x^2 + xy + 5y^2$,Show that $P + Q + R = 0$.

10. Simplify: -

i) $a - [b - \{a - (b - 1) + 3a\}]$. **Ans. $5a - 2b + 1$**

ii) $5 + [x - \{2y - (6x + y - 4) + 2x\} - \{x - (y - 2)\}]$. **Ans. $8x - y - 5$**

11. Simplify: -

i) $\frac{2}{3}abc\ (a^2 + b^2 - 3c^2)$ **Ans. $\frac{2}{3}a^3bc + \frac{2}{3}ab^3c - 2abc^3$**

12. Simplify: - $(3x^2 + 5x - 7)(x - 1) - (x^2 - 2x + 3)(x + 4)$. **Ans. $2x^3 - 7x - 5$**

13. Find the product $24x^2(1 - 2x)$ and evaluate it for $x = 2$. **Ans. $24x^2 - 48x^3$**

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