Unique Paper Code: MATH/2026/EXP/7/0482
Year: 2026 Chapter: Algebraic Expressions Class: 7 S.No.: 0482

Instructions:

1. This test contains 15 multiple-choice questions.
2. Each question has 4 choices. Choose the correct one.
3. Marks will be awarded for correct answers only.

Algebraic Expressions

1. The simplified form of $(0.6x^2y - 1.2xy^2) - (0.3x^2y + 0.8xy^2) + (1.5xy^2 - 0.9x^2y)$ is:
   (a) $-0.6x^2y - 0.5xy^2$
   (b) $0.6x^2y - 0.5xy^2$
   (c) $-0.6x^2y + 0.5xy^2$
   (d) $1.2x^2y - 2.0xy^2$

2. If the expression $5a - 3b + 2c$ is tripled and then the expression $2a + 4b - c$ is subtracted from the result, the final expression is:
   (a) $13a - 13b + 7c$
   (b) $13a - 5b + 5c$
   (c) $17a - 5b + 7c$
   (d) $17a - 13b + 5c$

3. Which of the following is a binomial with a constant term of -8?
   (a) $x^2 - 8x$
   (b) $3y - 8$
   (c) $-8mn$
   (d) $p^2 + q^2 - 8pq$

4. The area of a rectangle is given by $12k^2 + 5k - 2$. If its width is $3k + 2$, what is the expression for its length?
   (a) $4k - 1$
   (b) $4k + 1$
   (c) $9k^2 + 2k - 4$
   (d) $15k^2 + 2k - 4$

5. When $\frac{1}{4}(16p - 12q + 8)$ is added to $\frac{2}{3}(9q - 6p + 3)$, the coefficient of p in the sum is:
   (a) 0
   (b) 1

(c) 2

(d) 4

6. A number m is squared, then multiplied by 3, and then 5 times the number m is subtracted. The correct algebraic expression is:

   (a) $3m^2 - 5m$

   (b) $(3m)^2 - 5m$

   (c) $3(m^2 - 5m)$

   (d) $5m - 3m^2$

7. The sum of $7x^2y - 4xy^2$ and P is $2x^2y + 3xy^2$. What is P?

   (a) $9x^2y - xy^2$

   (b) $-5x^2y + 7xy^2$

   (c) $5x^2y - 7xy^2$

   (d) $-5x^2y - 7xy^2$

8. Simplify completely: $5a - [2b + \{3a - (4b - 5a + 6b)\}]$

   (a) $7a - 12b$

   (b) $7a + 0b$

   (c) $3a + 8b$

   (d) $3a - 8b$

9. In the expression $-\frac{2}{5}ab + \frac{7}{10}bc - 3$, the numerical coefficient of the second term is:

   (a) $\frac{7}{10}$

   (b) bc

   (c) 7

   (d) 10

10. The perimeter of an equilateral triangle is $15m + 21$. If two sides are $4m + 5$ and $5m + 8$, what is the length of the third side?

    (a) $6m + 8$

    (b) $9m + 13$

    (c) $15m + 21$

    (d) $20m + 26$

11. The difference between $8r^2s - 3rs^2$ and twice $2r^2s + rs^2$ is:

    (a) $4r^2s - 5rs^2$

    (b) $4r^2s - rs^2$

    (c) $12r^2s - rs^2$

    (d) $4r^2s - 4rs^2$

12. Which of the following is **not** a valid algebraic expression?

    (a) $5x\ddot{o}2y$

    (b) $3x^2 + \frac{y}{2} - 7$

    (c) $4a - 3b + 0c$

    (d) $m + n = 10$

13. If the length of a box is $(2x + 7)$ cm and its breadth is $(x - 3)$ cm, the expression for half of its perimeter is:

    (a) $(3x + 4)$ cm

    (b) $(1.5x + 2)$ cm

    (c) $(6x + 8)$ cm

    (d) $(3x - 10)$ cm

14. The expression $9 - 5u + 2u^2$ has:

    (a) The constant term 9, coefficient of u is -5, and coefficient of u^2 is 2.

    (b) The constant term 2, coefficient of u is 5, and coefficient of u^2 is -5.

    (c) Three terms, and -5u and $2u^2$ are like terms.

    (d) A constant term, a linear term, and a cubic term.

15. The simplified form of $\frac{3x-4y}{2} + \frac{2y-x}{4} - \frac{x+y}{8}$ is:

    (a) $\frac{9x-13y}{8}$

    (b) $\frac{13x-9y}{8}$

    (c) $\frac{9x-15y}{8}$

    (d) $\frac{15x-9y}{8}$