Unique Paper Code: MATH/2026/EXP/7/0231
Year: 2026 Chapter: Algebraic Expressions Class: 7 S.No.: 0231

Solutions: Algebraic Expressions

1.

$$A - B + C = (2m^2 - 5mn + n^2) - (-3m^2 + 4mn - 2n^2) + (m^2 + 3mn + n^2)$$
$$= 2m^2 - 5mn + n^2 + 3m^2 - 4mn + 2n^2 + m^2 + 3mn + n^2$$
$$= (2m^2 + 3m^2 + m^2) + (-5mn - 4mn + 3mn) + (n^2 + 2n^2 + n^2)$$
$$= 6m^2 + 2mn + 4n^2$$

The value of $A - B + C$ is $\boxed{6m^2 + 2mn + 4n^2}$.

2. The coefficients of x^2y and xy^2 are 7 and -4, respectively.

$$7 + (-4) = 3$$

The sum of the coefficients is $\boxed{3}$.

3. Let the expression to be subtracted be E:

$$(10p - 7q + 15r) - E = -2p + 3q - 8r$$
$$E = (10p - 7q + 15r) - (-2p + 3q - 8r) = 12p - 10q + 23r$$

The expression to be subtracted is $\boxed{12p - 10q + 23r}$.

4.

$$\frac{1}{3}(9a - 6b + 12) = 3a - 2b + 4$$
$$\frac{1}{2}(4a + 2b - 8) = 2a + b - 4$$
$$(3a - 2b + 4) - (2a + b - 4) = a - 3b + 8$$

The simplified expression is $\boxed{a - 3b + 8}$.

5. Like terms have the same variables raised to the same powers. The pair $-11p^2q$ and $7qp^2$ are like terms. The correct pair is $\boxed{-11p^2q \text{ and } 7qp^2}$.

6. The perimeter P of a rectangle is given by:

$$P = 2 \times (\text{length} + \text{breadth}) = 2 \times (5k + 2 + 3k - 1) = 2 \times (8k + 1) = 16k + 2$$

The algebraic expression for the perimeter is $\boxed{16k + 2}$ units.

7.

$$(2x^2-8)+(-3x^2+5x+10)+(x^2-5x-1) = (2x^2-3x^2+x^2)+(5x-5x)+(-8+10-1) = 0x^2+0x+1$$

The constant term is $\boxed{1}$.

8.
$$-1 \times (3u^2v - 2uv^2) = -3u^2v + 2uv^2$$
$$(-3u^2v + 2uv^2) + (-5u^2v + 7uv^2) = -8u^2v + 9uv^2$$
The result is $\boxed{-8u^2v + 9uv^2}$.

9. Simplify inside the brackets:
$$5b - 6a - 7b = -6a - 2b$$
$$4a - (-6a - 2b) = 4a + 6a + 2b = 10a + 2b$$
$$3b - (10a + 2b) = 3b - 10a - 2b = -10a + b$$
$$2a - (-10a + b) = 2a + 10a - b = 12a - b$$
The simplified expression is $\boxed{-8a - 5b}$.

10. The correct statement is: It has two variable terms and one constant term. The correct option is $\boxed{\text{D}}$.

11.
$$(12x + 50) - (4x - 25) - (3x + 15) = 12x + 50 - 4x + 25 - 3x - 15 = 5x + 60$$
The simplified expression for the money left is $\boxed{Rs.(5x + 60)}$.

12.
$$(5.2a^2 + 0.8a^2) + (-3.1a - a) + 4 = 6a^2 - 4.1a + 4$$
The number of terms is $\boxed{3}$.

13.
$$(-2f^2 + 5fg) + (3f^2 - 8fg) = f^2 - 3fg$$
$$(4f^2 - fg) - (f^2 - 3fg) = 3f^2 + 2fg$$
The result is $\boxed{3f^2 + 2fg}$.

14.
$$\frac{3x + 7}{2}$$
The algebraic expression is $\boxed{\frac{3x + 7}{2}}$.

15. The expression $7m - 6n + 0$ has a constant term of 0. The correct option is $\boxed{7m - 6n + 0}$.