Addition of Algebraic Expressions

- A. Choose the correct answer:
 - 1. The sum of (2x + 3y) and (4x 2y) is:
 - a) 6x + y b) 6x + 5y c) 2x + y d) 2x - y
 - 2. When adding algebraic expressions, we combine:
 - a) Unlike terms b) Constants only
 - c) Like terms d) Variables only
 - 3. The result of adding (5a 2b) and (–3a + 4b) is:
 - a) 2a + 2b b) 8a + 2b c) 2a + 6b d) -8a + 6b
 - 4. Which of the following represents the correct addition of $(3x^2 2x + 1)$ and $(x^2 + 4x 5)$?
 - a) $4x^2 + 2x 4$ b) $2x^2 + 2x 4$
 - c) $4x^2 + 6x 4$ d) $2x^2 + 6x 4$
 - 5. Add (2p + 3q) and (4p 5q). The coefficient of q in the result is:
 - a) –2 b) 2
 - c) 8 d) -8
- B. Write the Missing Terms to Complete the Sentences:
 - 1. To add algebraic expressions, we add the _____ terms.
 - 2. (5x + 3y) + (2x + 4y) =_____.
 - 3. When combining 7m 2n and 3m + 5n, the coefficient of m in the sum is _____.
 - 4. Adding (x − y) and (y − x) gives _____.
 - 5. The sum of $(3x^2 + 5)$ and $(-x^2 + 7)$ is _____.

C. Mark each sentence with a True (\checkmark) or False (X):

- 1. While adding algebraic expressions, we add coefficients of like terms.
- 2. 2x + 3y and 5x 2y can be added directly.

- 3. (a + b) + (b + a) is equal to 2a + 2b.
- 4. When adding 3x and 4x², we get 7x².
- 5. Adding (5x 2) and (–5x + 2) results in 0. _____

D. Figure out the answers to these questions:

- 1. Add (4x 5y + 3) and (-2x + 7y 1).
- 2. Find the sum: $(2a^2 + 3ab 5b^2) + (4a^2 2ab + 6b^2)$.
- 3. Simplify: (5p + 3q 2r) + (4p q + r).
- 4. Add: $(7x^2 3x + 2)$ and $(-2x^2 + 5x 8)$.
- 5. Find the result when $(x^2 + 2xy + y^2)$ is added to $(2x^2 3xy + 4y^2)$.

E. Challenge yourself with these questions:

- 1. Add (3x 2y + 7) and (-x + 4y 5).
- 2. Find the sum of $(2m^2 + 5m 3)$ and $(m^2 2m + 6)$.
- 3. Simplify the addition: (x + y + z) + (2x y z).
- 4. Add and simplify: $\left(\frac{4p}{3} + \frac{5q}{2}\right)$ and $\left(\frac{p}{6} \frac{q}{4}\right)$.
- 5. Add the polynomials: $(5x^2 4x + 1)$ and $(3x^2 + 2x 7)$.