

Addition of algebraic expressions

A. Choose the correct answer:

1. What is the sum of $3x + 2$ and $5x - 4$?

- a) $8x - 2$
- b) $2x + 6$
- c) $8x + 2$
- d) $7x - 2$

2. Which of the following is a correct addition of $4a - 3b$ and $-2a + 5b$?

- a) $6a + 2b$
- b) $2a + 8b$
- c) $2a + 2b$
- d) $-6a + 2b$

3. While adding algebraic expressions, we combine

- a) coefficients only
- b) variables only
- c) like terms
- d) unlike terms

4. What is the sum of $x^2 + 3x + 4$ and $-2x^2 + x - 1$?

- a) $-x^2 + 4x + 3$
- b) $-x^2 + 2x + 5$
- c) $x^2 + 2x + 3$
- d) $2x^2 + 4x + 3$

5. Which of the following is a like term to $6xy$?

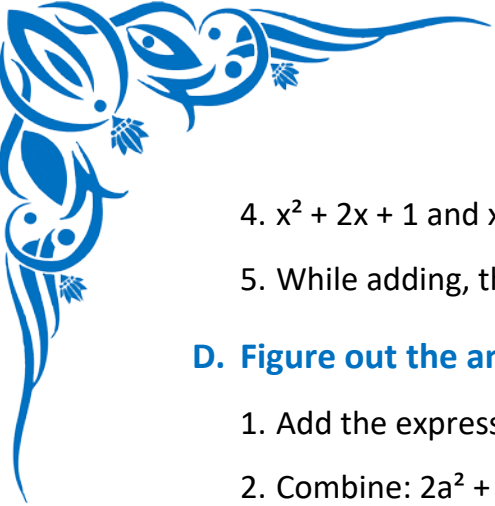
- a) $6x^2$
- b) $3xy$
- c) $5x$
- d) $-2y$

B. Write the Missing Terms to Complete the Sentences:

1. Only _____ terms can be added or subtracted directly.
2. The sum of $2x$ and $3x$ is _____.
3. Addition of algebraic expressions is done by adding their _____ terms.
4. $(5x - 4) + (2x + 1) =$ _____.
5. The result of adding $4a + 5b$ and $-3a - b$ is _____.

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

1. Like terms have the same variables raised to the same powers. _____
2. $3x$ and $-5x^2$ are like terms. _____
3. The sum of a monomial and a binomial is always a trinomial. _____



4. $x^2 + 2x + 1$ and $x^2 - 2x - 1$ are like terms. _____

5. While adding, the sign of each term must be considered. _____

D. Figure out the answers to these questions:

1. Add the expressions: $3x + 4y - 2$ and $5x - 2y + 7$.
2. Combine: $2a^2 + 3ab + 4$ and $-a^2 + ab - 1$.
3. Write two algebraic expressions and show step-by-step how to add them.
4. Given three expressions $x + y$, $2x - y$, and $-3x + 4y$, find their total sum.
5. From the sum of $6m - 4n$ and $-2m + 5n + 3$, identify and group like terms.

E. Challenge yourself with these questions:

1. Create two binomial expressions and find their sum.
2. Add $3p^2 - 2p + 4$ and $-p^2 + 5p - 3$ using vertical arrangement.
3. Make your own algebraic expression and add it to $2x + 3y - 4$.
4. Find the result of adding a constant expression and a variable expression.
5. Arrange and simplify: $(2x + 3y - 5) + (x - y + 7) + (-3x + 2y - 1)$.