

Subtraction of Algebraic Expressions

A. Choose the correct answer:

1. The result of subtracting $(2x + 3y)$ from $(5x + 4y)$ is:

- a) $3x + y$
- b) $7x + 7y$
- c) $3x + 7y$
- d) $-3x + y$

2. When subtracting $(4a - 2b) - (2a + b)$, the expression becomes:

- a) $6a - b$
- b) $2a - 3b$
- c) $2a + 3b$
- d) $6a + b$

3. Subtract $(3x^2 + 2x - 1)$ from $(5x^2 - x + 4)$. What is the coefficient of x ?

- a) 3
- b) -3
- c) -5
- d) 5

4. Which of the following is the correct subtraction of $(7m - 4n) - (3m + 5n)$?

- a) $4m - 9n$
- b) $4m + 9n$
- c) $10m - 9n$
- d) $10m + 9n$

5. Subtracting $(x - 2y + 3)$ from $(2x + y - 5)$ results in:

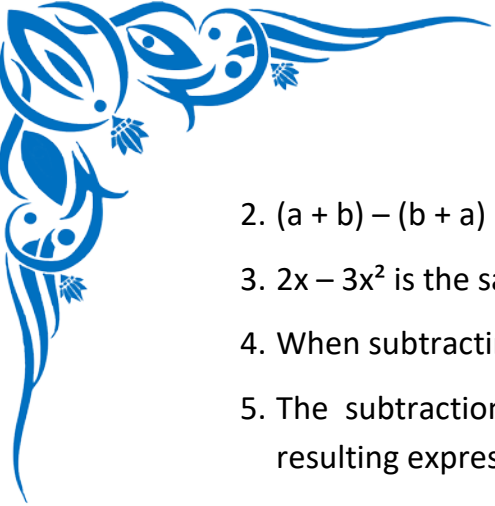
- a) $x + 3y - 8$
- b) $x - 3y + 8$
- c) $x + 3y + 8$
- d) $x - 3y - 8$

B. Write the Missing Terms to Complete the Sentences:

1. To subtract algebraic expressions, we subtract the _____ terms.
2. $(5x + 3y) - (2x + 4y) =$ _____.
3. Subtracting $(2a + 3b)$ from $(5a - b)$ results in _____.
4. In subtraction, we must change the sign of each term of the _____ expression.
5. Subtracting $3p - 4q$ from $p + 2q$ gives _____.

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

1. While subtracting algebraic expressions, we change the signs of the second expression. _____



2. $(a + b) - (b + a)$ always results in 0. _____
3. $2x - 3x^2$ is the same as $3x^2 - 2x$ after subtraction. _____
4. When subtracting $(5p - 2q)$ and $(3p + 4q)$, we get $2p - 6q$. _____
5. The subtraction of polynomials can sometimes increase the degree of the resulting expression. _____

D. Figure out the answers to these questions:

1. Subtract $(2x^2 + 3x - 4)$ from $(5x^2 - x + 7)$.
2. Find the result of $(4a - 5b + 3c) - (2a + b - 2c)$.
3. Simplify: $(7p + 5q - 2r) - (3p - 2q + r)$.
4. Subtract and simplify: $(3x^2 - 4x + 5) - (2x^2 + x - 3)$.
5. Find $(x^2 + 2xy + y^2) - (2x^2 - 3xy + 4y^2)$.

E. Challenge yourself with these questions:

1. Subtract $(4x - 5y + 6)$ from $(7x + 2y - 3)$.
2. Find and simplify the expression $(2m^2 + 5m - 8) - (m^2 - 3m + 4)$.
3. Subtract: $(x + y + z) - (2x - y + 3z)$.
4. Simplify the subtraction: $\left(\frac{3a}{2} + \frac{5b}{4}\right) - \left(\frac{a}{3} - \frac{b}{6}\right)$.
5. Find the result of subtracting $(5x^2 - 2x + 1)$ from $(8x^2 + 4x - 6)$.