Multiplication of algebraic expressions

- A. Choose the correct answer:
 - 1. The product of (2x) and (3x) is:
 - a) 6x b) 5x²
 - c) 6x² d) 5x
 - 2. What is the result of multiplying (x + 2) by 3?
 - a) 3x + 2 b) 3x + 6
 - c) x + 6 d) 3x + 2x
 - 3. When multiplying (2a) and (3b), the product is:
 - a) 5ab b) 6ab c) 6a + b d) 5a + b
 - 4. Which of the following shows the product of (x + 5) and (x 2)?

a) x ² + 3x – 10	b) x ² – 3x – 10
c) $x^2 - 10x + 3$	d) x ² + 10x – 3

- 5. Find the product of (2p 3q) and (p + 4q):
 - a) $2p^2 + 5pq 12q^2$ b) $2p^2 5pq 12q^2$
 - c) $2p^2 + 8pq 3pq 12q^2$ d) $2p^2 8pq + 3pq + 12q^2$

B. Write the Missing Terms to Complete the Sentences:

- 1. The product of two monomials is a ______.
- 2. (3x)(4y) = _____.
- 3. Multiplying a monomial by a binomial involves using the _____ property.
- 4. (2a + 3b) × 0 = _____.
- 5. The product of (x + 3) and (x + 5) is ______.

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

- 1. The product of two binomials is always a trinomial.
- 2. (a + b)(a b) simplifies to $a^2 b^2$.
- 3. Multiplying a monomial by a binomial follows the distributive property.

- 4. $(x + 2)^2$ is equal to $x^2 + 4$.
- 5. $(2x)(3x^2) = 5x^3$.

D. Figure out the answers to these questions:

- 1. Multiply: $(2x^2) \times (3x^3)$.
- 2. Find the product: (5a 2b)(2a + b).
- 3. Multiply and simplify: (x + 4)(x 2).
- 4. Multiply (2p + 3q) by (4p 5q).
- 5. Find the result of multiplying $\left(\frac{3m}{2}\right) by \left(\frac{4n}{3}\right)$.

E. Challenge yourself with these questions:

- 1. Multiply (3x 5) and (2x + 1).
- 2. Find the product of $(x^2 2x + 3)$ and 4.
- 3. Multiply (2a 3b) with (a + 2b) and simplify.
- 4. Expand and simplify: (x + 3y)(x 2y).
- 5. Multiply and simplify: $\left(\frac{5p}{4}\right)\left(\frac{8q}{5}\right)$.