

Multiplication of Three or More Monomials

A. Choose the correct answer:

1. Find the product of $(2x)$ $(3x^2)$ $(4x^3)$:

- a) $24x^5$
- b) $24x^6$
- c) $9x^6$
- d) $9x^5$

2. What is the result of multiplying (a^2) $(-3a^3)$ $(5a)$?

- a) $-15a^6$
- b) $15a^6$
- c) $-15a^5$
- d) $15a^5$

3. The product of $\left(\frac{2m}{5}\right)$, $\left(\frac{5n}{3}\right)$, and $\left(\frac{3p}{2}\right)$ is:

- a) $\frac{5mnp}{3}$
- b) $\frac{mnp}{1}$
- c) $\frac{5mnp}{2}$
- d) $\frac{5mnp}{6}$

4. Multiply $(-2p^2q)$ $(3pq^2)$ $(-4p^3q^3)$:

- a) $24p^6q^6$
- b) $-24p^6q^6$
- c) $24p^7q^5$
- d) $-24p^7q^5$

5. The result of (x^2) (y^3) (z) is:

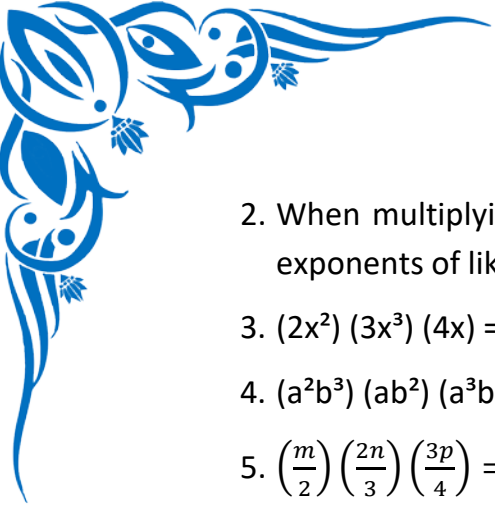
- a) xyz^3
- b) x^2y^3z
- c) x^3y^2z
- d) x^2yz^3

B. Write the Missing Terms to Complete the Sentences:

1. The product of three monomials is always a _____.
2. $(3a^2)$ $(-2a^3)$ $(4a) =$ _____.
3. Multiplying monomials involves multiplying the _____ and adding the _____ of the same base.
4. $\left(\frac{2x}{3}\right)\left(\frac{5y}{2}\right)\left(\frac{3z}{4}\right) =$ _____.
5. (m^2n^3) (mn^2) (m^3n) simplifies to _____.

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

1. The product of three or more monomials is always a monomial. _____



2. When multiplying three monomials, we multiply the coefficients and add the exponents of like bases. _____
3. $(2x^2)(3x^3)(4x) = 24x^7$. _____
4. $(a^2b^3)(ab^2)(a^3b) = a^6b^6$. _____
5. $\left(\frac{m}{2}\right)\left(\frac{2n}{3}\right)\left(\frac{3p}{4}\right) = \frac{mnp}{2}$. _____

D. Figure out the answers to these questions:

1. Multiply and simplify: $(2x^2y)(-3xy^2)(4x^3)$.
2. Find the product of $(-5p^2)(2p^3q)(-p^2q^2)$.
3. Simplify the product: $(a^2b)(ab^2)(a^3b^3)$.
4. Multiply $\left(\frac{3x}{2}\right)\left(-\frac{4y}{3}\right)\left(\frac{5z}{6}\right)$ and simplify.
5. Find the result of $(2p^2q^3)(3pq^2)(4p^3q)$.

E. Challenge yourself with these questions:

1. Multiply $(4x^2y^3)(-2xy^2)(3x^3y)$.
2. Find the product of $(2m^3n^2)(-3m^2n^3)(4mn)$.
3. Simplify: $\left(\frac{5a}{6}\right)\left(-\frac{2b}{3}\right)\left(\frac{a}{4}\right)$.
4. Multiply $\left(\frac{x^2}{3}\right)\left(\frac{3x}{2}\right)\left(\frac{2x^4}{5}\right)$ and simplify.
5. Find the result of $(7p^2q^3)(-p^3q^2)(2pq)$.