

Exponents; Product & Power Rules

Product Rule

When you multiply exponentials with the same base, add the exponents.

Power Rule

When you raise a power to a power, multiply the exponents.

Perform the following operations

1. $(x^3)(x^5)$

2. $(3A)(4A^3)(5A^4)$

3. $(X^2Y^3)(X^5Y^7)$

4. $(2xy^2)(3x^3y^4)$

5. $(3a^2b^2c^3)(-5ab^4c^5)$

6. $(-2xy^4z^5)(-4x^3y^5z^6)$

7. $(X^2)^3$

8. $(3x^4)^2$

9. $(-2x^3y^2)^3$

10. $(-5d^2f^5g^{10})^4$