

Exponent Properties - NOTES

Simplify. Your answer should contain only positive exponents.

1) $4x^3y^2 \cdot 3x^2y^2$

$$12x^5y^4$$

2) $4yx^2z^4 \cdot 2zx^3y^4$

$$8x^5y^5z^6$$

3) $\frac{5x^2y^3}{15x^4y^3}$

$$\frac{1}{3x^2}$$

4) $\frac{3zx^2y^4}{4x^2y^2z^2}$

$$\frac{3}{4y^2z}$$

5) $(4xy^2)^2$

$$16x^2y^4$$

6) $(4m^3p^4q^2)^3$

$$64m^9p^{12}q^6$$

7) $(2vu^3)^2 \cdot (u^2v^4)^2 \cdot uv^2$

$$4v^2u^6 \cdot u^4v^8 \cdot uv^2$$

$$4u^{11}v^{12}$$

8) $\frac{3x^2y^4}{3x^3y^4 \cdot x^3y^3}$

$$\frac{3x^2y^4}{3x^6y^7} = \frac{1}{x^4y^3}$$

9) $\left(\frac{2x^4y^3}{2x^4}\right)^2$

$$(y^3)^2 = y^6$$

10) $\frac{ab^2 \cdot 2ab^3}{(2b^4)^2}$

$$\frac{2a^2b^5}{4b^8} = \frac{a^2}{2b^3}$$