

Laws of exponents Practice Worksheet

Simplify. Your answer should contain only positive exponents.

$$1) \frac{2u^3v^3 \cdot (3u^2)^2}{2u^2}$$

$$2) \frac{(4xy^2)^3}{(4y^3)^4 \cdot 2y^3}$$

$$3) \frac{(4uv^2)^2}{3u^2v^4 \cdot 3v^2}$$

$$4) \left(\frac{4a^4b^3}{3a^4b^3 \cdot 4a^3b^4} \right)^3$$

$$5) \left(\frac{3y^3 \cdot 3x^3y^4}{4x^4y^2} \right)^4$$

$$6) \left(\frac{3xy^4 \cdot 3x^3y^2}{yx^4} \right)^3$$

$$7) \frac{2ba^2}{4a(2a^3b^4)^3}$$

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

$$9) \frac{(m^2n^2)^2}{3m^4n^2 \cdot 2m^3n^2}$$

$$10) \frac{x^2}{4x^4y^2 \cdot (3x^4y^2)^2}$$

$$11) \left(\frac{n}{m \cdot 2m^4n^4} \right)^4$$

$$12) \left(\frac{3x^2y^3 \cdot 4x^3y^2}{3xy^3} \right)^4$$

$$256x^{16}y^8$$

$$13) \left(\frac{3x^2y^4 \cdot x^3y^3}{(2x^2y^3)^4} \right)^2$$

$$14) \left(\frac{2u^4v^3 \cdot 2uv^3}{4u^3} \right)^4$$

$$15) \frac{3uv^2}{(u^2v^2)^2}$$

$$16) \frac{(4y)^3}{(4y^2)^2}$$