

Practice Assignment #2

Simplify. Your answer should contain only positive exponents.

$$1) \frac{a^{-2}b^{-1}}{a^3b^{-2} \cdot (ab^{-3})^4}$$
$$\frac{b^{13}}{a^9}$$

$$2) \frac{x^{-4}y^{-2} \cdot xy^2}{(x^{-1}y^{-1})^2}$$
$$\frac{y^2}{x}$$

$$3) \frac{b^4 \cdot (2a^{-1})^4}{2a^3}$$
$$\frac{8b^4}{a^7}$$

$$4) \frac{2x^0y^0 \cdot x^{-4}y^3}{(x^3y^{-1})^{-1}}$$
$$\frac{2y^2}{x}$$

$$5) \left(\frac{u^3v^3}{2u^{-1}v^2 \cdot 2u^3} \right)^{-1}$$
$$\frac{4}{uv}$$

$$6) \frac{2y^2 \cdot (yx^0)^{-4}}{2x^2}$$
$$\frac{1}{y^2x^2}$$

$$7) \left(\frac{x^3 y^{-4}}{(2xy)^0 \cdot (x^3 y^2)^3} \right)^0$$

1

$$8) \frac{(2a^3 b^3)^4}{a^2 b^2 \cdot 2ab^{-4}}$$

$8b^{14} a^9$

$$9) \frac{2v \cdot u^0 v^{-4}}{(u^2)^4}$$

$\frac{2}{v^3 u^8}$

$$10) \left(\frac{2v^4 \cdot 2u^{-1} v^4}{2u^{-1} v^2} \right)^3$$

$8v^{18}$

Simplify. Write each answer in scientific notation.

$$11) (1.6 \times 10^{-1})(6.8 \times 10^{-2})$$

1.088×10^{-2}

$$12) (3.1 \times 10^{-5})(2 \times 10^{-1})$$

6.2×10^{-6}

$$13) \frac{9.05 \times 10^3}{5 \times 10^{-5}}$$

1.81×10^8

$$14) \frac{3.9 \times 10^0}{9.3 \times 10^1}$$

4.194×10^{-2}