

Practice Quiz - Properties of Exponents

Date _____ Period _____

Simplify. Your answer should contain only positive exponents.

1) $6x^2y^2z^5 \cdot 6x^3y^5z^{-6}$

$$\frac{36x^5y^7}{z}$$

2) $(2h^{-6}j^4k^2)^{-3}$

$$\frac{h^{18}}{8j^{12}k^6}$$

3) $\frac{4a^4b^4c^3}{4a^2b^2}$

$$a^2b^2c^3$$

4) $\frac{3p^4q^{-4}r^{-2}}{5p^3q^3r^5}$

$$\frac{3p}{5q^7r^7}$$

$$5) (x^3 y^5 z^{-6})^4 \cdot x^2 y^6 z^2$$

$$\frac{x^{14} y^{26}}{z^{22}}$$

$$6) (a^3 b^5 c^2)^{-6} \cdot a^{-1} b^{-3} c^2$$

$$\frac{1}{a^{19} b^{33} c^{10}}$$

$$7) \frac{p^5 r^2 \cdot 5 p^{-3} q^6 r^6}{2 q^{-5} r^{-2}}$$

$$\frac{5 q^{11} r^{10} p^2}{2}$$

$$8) \frac{2 y x^3 z^5 \cdot 3 x^5 y^2 z^5}{3 x y^{-2}}$$

$$2 y^5 x^7 z^{10}$$

$$9) \left(\frac{b^{-5} c^{-6}}{a^5 b^4} \right)^2$$

$$\frac{1}{b^{18} c^{12} a^{10}}$$

$$10) \frac{x^3 y^6 z^{-5}}{(x^4 y^{-1} z^{-1})^{-5}}$$

$$\frac{x^{23} y}{z^{10}}$$