Name _____

Power of Quotient

Simplify the exponents. (Quotient of quotients)

1) $\left(\frac{\frac{a^3}{b}}{\frac{c}{d^2}}\right)^2$ $\frac{a^6d^4}{b^2c^2}$	2) $\left(\frac{\frac{3x^2}{y}}{\frac{2}{x^2}}\right)^3$ $\frac{27x^8}{2y^3}$	3) $\left(\frac{\frac{2p^3}{q}}{\frac{1}{p^2q^2}}\right)^2$ $4p^{10}q^4$
4) $\left(\frac{\frac{5a^2b}{c}}{\frac{2d}{e^2}}\right)^3$ $\frac{125a^6b^3e^6}{8c^3d^3}$	5) $\left(\frac{\frac{x}{y}}{\frac{3}{2y^2}}\right)^2$ $\frac{4x^2}{9}$	6) $\left(\frac{\frac{4ab^2}{c}}{\frac{2d}{e}}\right)^3$ $\frac{64a^3b^6e^3}{c^3d^3}$
7) $\left(\frac{\frac{2m}{3n}}{\frac{1}{4mn^2}}\right)^2$ $\frac{32m^2n^3}{9}$	8) $\left(\frac{\frac{2x^2}{y}}{\frac{z}{3x}}\right)^3$ $\frac{216x^7}{y^3z^3}$	9) $\left(\frac{\frac{3}{2q}}{\frac{b^2}{3}}\right)^2$ $\frac{9}{4a^2b^4}$
10) $\left(\frac{\frac{cd^2}{2}}{\frac{e^3}{f}}\right)^3$ $\frac{27c^3d^6f^3}{8e^9}$	11) $\left(\frac{\frac{xy^3}{z}}{\frac{4}{y}}\right)^2$ $\frac{x^2y^4}{z^2}$	12) $\left(\frac{\frac{2p^2q}{r}}{\frac{1}{2p}}\right)^3$ $16p^6q^3r^3$