Name _____

Exponents (Quotient of powers)

By Using the law Quotient of powers,
write each expression in a single exponent. ($x^m / x^n = x^{m-n}$)

1) $\frac{a^{12}}{a^3}$ a^9	2) $\frac{c^{15}}{c^3}$ c^{12}	3) $\frac{(xyz)^4}{(xyz)^7}$ $(xyz)^{-3}$
4) $\frac{(-w)^{-3}}{(-w)^{-7}}$ $(-w)^4$	5) $\frac{(-z)^{-11}}{(-z)^{-3}}$ $(-z)^{-8}$	6) $\frac{(ab)^{-7}}{(ab)^2}$ $(ab)^{-9}$
7) $\left(\frac{x}{y}\right)^{15} \div \left(\frac{x}{y}\right)^{12}$ $\left(\frac{x}{y}\right)^3$	8) $\left(\frac{a}{b}\right)^{13} \div \left(\frac{a}{b}\right)^4$ $\left(\frac{a}{b}\right)^9$	9) $\left(\frac{-c}{d}\right)^{-2} \div \left(\frac{-c}{d}\right)^{-4}$ $\left(\frac{-c}{d}\right)^2$
10) $\left(\frac{1}{x}\right)^{-5} \div \left(\frac{1}{x}\right)^{-7}$ $\left(\frac{1}{x}\right)^2$	11) $\left(\frac{m}{5}\right)^{-8} \div \left(\frac{m}{5}\right)^{-3}$ $\left(\frac{m}{5}\right)^{-5}$	12) $\left(\frac{1}{xy}\right)^{-4} \div \left(\frac{1}{xy}\right)^{-9}$ $\left(\frac{1}{xy}\right)^5$