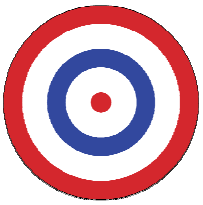

7-5 Division Properties of Exponents

Today's Learning Target:

* I CAN divide powers with the same base
* I CAN raise a quotient to a power

The rule for dividing powers: $\frac{a^m}{a^n} = a^{m-n}$ (with the same base)

$$\frac{x^4}{x^2} \qquad \frac{y^{-3}}{y^2}$$

$$\frac{4^8 g^3}{4^6 g^8} \qquad \frac{x^4 y}{x^{-2} y^3} \qquad \frac{15 d^6 e^{-4}}{5 d^4 e^{-3}}$$

The Power of a Quotient rule: $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$

$\left(\frac{x}{9}\right)^2$ $\left(\frac{1}{k}\right)^2$ $\left(\frac{b^4}{3a}\right)^2$

$\left(\frac{4}{y^6}\right)^{-2}$ $\left(\frac{4}{5}\right)^{-1}$ $\left(\frac{h^5}{h}\right)^{-2}$

$\left(\frac{1}{6}\right)^{-2}$ $\left(\frac{3^2}{3^{-3}}\right)^4$

$\left(\frac{x^5 x}{x^3}\right)^4$ $\left(\frac{y^2}{z^5}\right)^{-3}$ $\left(\frac{6x^2 y}{7z^9}\right)^0$

$\left(\frac{4ab^4}{5c^0 d^3}\right)^2$ $\left(-\frac{5p}{3q^{10}}\right)^{-2}$