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Review

$$x^2$$

base exponent/power

$$x^2 x^5 = x^7$$

ADD the EXPONENTS

$$y y^3 = y^4$$

$$(x^3)^4 = x^{12} \quad \leftarrow \text{MULTIPLY the EXPONENTS}$$

$$\begin{aligned} (3x^3y^5)^2 &= 3^2 (x^3)^2 (y^5)^2 \\ &= 9x^6y^{10} \end{aligned}$$

8-2 Dividing Monomials

$$\frac{4^5}{4^3} = \frac{4 \ 4 \ 4 \ 4 \ 4}{4 \ 4 \ 4}$$

$$\frac{3^6}{3^2} =$$

$$\frac{x^{15}}{x^7} =$$

SUBTRACT the EXPONENTS

Example 1) $\frac{x^5 y^8}{x y} =$

Example 2) $\frac{4 x^7 y^4}{2 x y^3} =$

Example 3) $\frac{5 x^9 y^7}{3 x y^5} =$

Example 4) $\frac{9 x^2 y^7}{3 y^4} =$

Powers of Quotients

Division

$$\left(\frac{2}{3}\right)^2 =$$

$$\left(\frac{x}{y}\right)^5 =$$

$$\left(\frac{2x^2y^3}{3}\right)^4 =$$

$$\left(\frac{3x^7}{5}\right)^2 =$$

Using negative exponents:

$$x^{-n} = \frac{1}{x^n}$$