

BE-1A MONDAY 4-6-09

① $(3x^2y^4z)(-2x^5y^2z^3)$

② $(3x^4y^5)^2$

③ $(4xy)^2(-2x^4y)^3$

④ List the 3 Exponent Rules
(NAME, FORMULA, EXAMPLE)

MIR $a^N \cdot a^M = a^{N+M}$ $x^5 x^{10} = x^{15}$

PPR $(a^N)^M = a^{N \cdot M}$ $(x^5)^{10} = x^{50}$

GPR $\left(\frac{ab}{cd}\right)^N = \frac{a^N b^N}{c^N d^N}$ $\left(\frac{2x^2y^3}{a^4b}\right)^2 = \frac{4x^4y^6}{a^8b^2}$

- Quiz 2 Return/review
- Homework 2 Return/review

Ch. 8-2 Dividing Monomials

↓
"a number, variable, or product of
(times)
a number and variable(s)."

Find the shortcut:

$$\begin{aligned}\frac{x^5}{x^2} &= \frac{x \cdot x \cdot x \cdot x \cdot x}{x \cdot x} = \frac{x}{x} \cdot \frac{x}{x} \cdot \frac{x}{1} \cdot \frac{x}{1} \cdot \frac{x}{1} \\ &= \underbrace{1 \cdot 1} \cdot \underbrace{x \cdot x \cdot x} \\ &= 1 \cdot x^3 \\ \frac{x^5}{x^2} &= x^3\end{aligned}$$

SHORTCUT?

DR
Division
Rule
for
Exponents

$$\boxed{\frac{a^m}{a^n} = a^{m-n}}$$

(EX) $\frac{x^3 y^8}{x y^2} = x^2 y^6$

$$\begin{array}{l} \text{EX 1} \\ \text{Pg 417} \end{array} \quad \frac{a^5 b^8}{a b^3} = \boxed{a^4 b^5}$$

$$\textcircled{\text{EX}} \quad \frac{7^8}{7^2} = \boxed{7^6} = 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 = 117,649$$

$$\textcircled{\text{EX}} \quad \frac{x^8 y^{12}}{x^2 y^7} = \boxed{x^6 y^5}$$

$$\textcircled{\text{EX}} \quad \left(\frac{2a^3 b^{12}}{5ab} \right)^2 = \frac{4a^6 b^{24}}{25a^2 b^2} = \boxed{\frac{4a^4 b^{22}}{25}}$$

- Homework: ① Pg 421 # 14 - 19
- ② Memorize the 4 exponent rules
(two left!)