

April 23, 2012 ^{Algo}
Anything to correct?



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**“Keep it down. Don’t make
me come in there.”**

$$\begin{aligned} 18) \quad & 2ab^4 \cdot (2a^3)^3 \\ & = 2ab^4 \cdot 8a^9 \\ & = 16a^{10}b^4 \end{aligned}$$

$$9) \quad (-2ab^2)^3$$

$$= -8a^3b^6$$

$$\begin{aligned} 8) \quad & (-4nm^4)^2 \\ & = 16m^8n^2 \end{aligned}$$

4/23 - Combining Exponent Rules

Order of Operations

1. Parentheses
2. Exponents
3. Multiply/Divide
4. Add/Subtract

$$x^2 \cdot x^3 = x^5 \quad \text{add the exponents}$$

$$(x^2)^3 = x^6 \quad \text{multiply the exponents}$$

$$\frac{x^2}{x^3} = \frac{1}{x} \quad \text{cancel, subtract exponents}$$

$$\frac{v^3(v^4)^3}{v^4}$$

$$= \frac{v^3 \cdot v^{12}}{v^4}$$

$$= \frac{v^{15}}{v^4}$$

$$= v^{11}$$

$$\frac{2x}{(x^4 \cdot x)^2}$$

$$= \frac{2x}{(x^5)^2}$$

$$= \frac{2x}{x^{10}}$$

$$= \frac{2}{x^9}$$

$$\frac{(a^2)^4}{a \cdot -a}$$
$$= \frac{a^8}{-a^2}$$
$$= -a^6$$

$$\frac{(-2p)^2}{-p^2 \cdot 2p^3}$$
$$= \frac{4p^2}{-2p^5}$$
$$= -\frac{2}{p^3}$$

$$\begin{aligned}
 & \frac{(2yx^4)^3}{(2yx^2 \cdot x^4y^3)^2} \\
 &= \frac{8y^3x^{12}}{(2x^6y^4)^2} \\
 &= \frac{\cancel{8}^2 \cancel{x}^{12} \cancel{y}^3}{\cancel{4}^2 \cancel{x}^{12} \cancel{y}^8} \\
 &= \frac{2}{y^5}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{(2m^4n^2)^3}{nm^4 \cdot n} \\
 &= \frac{\cancel{8}^3 \cancel{m}^{12} \cancel{n}^6}{\cancel{m}^4 \cancel{n}^2} \\
 &= 8m^8n^4
 \end{aligned}$$

$$\frac{2u^3v^2}{(-u^3v^4)^2(2vu^3)^4}$$

$$= \frac{-2u^3v^2}{u^6v^8 \cdot 16v^4u^{12}}$$

$$= \frac{-2u^3v^2}{16u^8v^{12}}$$

$$= \frac{-1}{8u^5v^{10}}$$

$$\frac{(-b^3)^4}{-2a^2b^2 \cdot -2ba^2}$$

$$= \frac{b^9}{4a^4b^3}$$

$$= \frac{b^6}{4a^4}$$

Homework

Lilac

Exponents WS7

Due Tues.