

Warm Up:

Simplify the following expressions.

$$(-2x^2)^3$$

$$(-2x^3)^2$$

$$\frac{(2x^3y^2)^3}{64x^2y^5}$$

The Next Level...

$$\left(\frac{3x^5y^3}{4xz^2}\right)^6$$

Finish the following exponent rules.

$$a^m \cdot a^n =$$

$$(ab)^m =$$

$$(a^m)^n =$$

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

$$\left(\frac{a}{b}\right)^m =$$

$$(-)^{\text{even}} = \underline{\hspace{2cm}}$$

$$(-)^{\text{odd}} = \underline{\hspace{2cm}}$$

$$\frac{2x^3y}{12xy^2} \cdot \frac{(3xy^2)^2}{x}$$

$$1) \left(\frac{7x^5}{2y^2} \right)^4$$

$$2) \frac{2x}{3y} \cdot \frac{5x^3y^4}{4x^2y}$$

$$3) \left(\frac{a^2}{b} \right)^3 \cdot \frac{1}{3a^2}$$

$$4) \left(-\frac{2s^4}{3t} \right)^2 \cdot \left(\frac{t^7}{11} \right)$$

$$5) (-4x)^2 \cdot (-4x^2)^3$$

$$6) \left(\frac{3x^4}{4y} \right)^3 \cdot \frac{2y^5}{x^5}$$

$$7) \frac{2x^3y^8}{9y^3z} \cdot \frac{6x^3z^4}{4xy^2}$$

$$1) \frac{16y^8}{7^4x_{20}}$$

$$2) \frac{6}{5}x^2y^2$$

$$3) \frac{3b^3}{a^4}$$

$$4) \frac{99}{4^8t^5}$$

$$5) -4^5x^8$$

$$6) \frac{32}{27}x^7y^4$$

$$7) \frac{1}{5}x^3y^3z^3$$