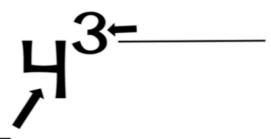


3 TOPIC: _____

EQ: _____

QUESTIONS: | NOTES:

RECALL:



The _____ tells us how many times to _____ the _____

Examples: Expand and simplify each power

1. $5^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
2. $9^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
3. $x^3 = \underline{\hspace{2cm}}$
4. $y^6 = \underline{\hspace{2cm}}$

Examples: Write each in terms of exponents:

1. $x \cdot x \cdot x \cdot x \cdot x = \underline{\hspace{2cm}}$
2. $m \cdot m \cdot m = \underline{\hspace{2cm}}$
3. $a \cdot a \cdot b \cdot b = \underline{\hspace{2cm}}$

ZERO Power Rule:

$$x^0 = 1$$

Anything raised to the zero power is always _____.

Examples

$$5^0 \qquad -10yz^0 \qquad \left(\frac{-m^3n^2o^5}{m^3n^2o^5}\right)^0$$

$$(-495x^5y^2z^{10})^0 \qquad (x^2y^5)^0 \cdot (2x)$$

Negative Exponent Rules:

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

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

<u>Problem</u>	<u>Simplify</u>
x^{-2}	
$4a^{-5}$	
$\frac{1}{x^{-4}}$	
$\frac{1}{3y^{-2}}$	

1. $\frac{2}{3x^{-4}}$

2. $\frac{m^{-2}}{6}$

3. $x^{-2}y^4z^{-3}$

4. $(x^{-2}y)$

Summary: _____

