



Warm up-

Simplify the following

$$1. r^{-5}t^7r^6t^{-1} =$$

$R^1 + 6$

$$2. \frac{5^3}{5^8} = \frac{1}{5^5}$$

$$3. w^3x^5w^2 = w^5x^5$$

$$4. \frac{3x^2y^3z \cdot 2xz^2}{3xy^2} = \frac{2x^2z^3y}{1}$$

$$5. \frac{a^2b^3a^4}{a^3b} =$$

$a^3b^3$

$$6. \frac{4x^5}{6x^3} = \frac{2x^2}{3}$$

## Exponent Properties-

Remember: Zero as an Exponent!

For every nonzero number  $a$ ,  $a^0 = 1$

Ex: 1.  $5^0 = 1$     2.  $300^0 = 1$     3.  $(1.02)^0 = 1$

## Exponent Properties-

### Negative Exponent

For every nonzero number  $a$  and integer  $n$ ,  $a^{-n} = 1/a^n$

$$\text{Ex: } 1. 6^{-4} = \frac{1}{6^4} \quad 2. (-8)^{-1} = \frac{1}{(-8)^1}$$

Simplify

1.  $(-7)^0$

2.  $-3^{(-2)} = \frac{1}{-3^2}$

3.  $3^{-4} = \frac{1}{3^4}$

Simplify

$$1. 4xy^{-3} = \frac{4x}{y^3}$$

$$2. 7s^{-4} = \frac{7}{s^4}$$

$$3. \frac{n^{-5}}{v^2} = \frac{1}{n^5 v^2}$$

Simplify

$$1. \frac{3x^{-2} \cancel{y^0}}{2y} = \frac{3}{2x^2y}$$

$$2. \frac{5}{x^3y^{-2}} = \frac{5y^2}{x^3}$$

$$3. \frac{3^{-2}m^3n^{-5}}{v^2w^{-3}} = \frac{m^3w^3}{3^2n^5v^2}$$

# Classwork!

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Pg 433 #2, 3, 7, 9,  
17-31 odd