Bell Work: (will be done in the notebooks)

1) Take a spiral notebook.

2) Put your name on it.

3) At the top of the 1st page, put today's date.

4) Complete the bellwork.

Find the value of each expression.

1) $5^2 = 25$ 2) $3^3 = 27$ 3) $4^2 = 16$ 4) $6^1 = 6$

Zero Exponents Property

- Anything to the zero power equals one

y^0
x^0
$(xy)^0$ > Always = 1

Negative Exponents → Are not allowed

Steps to eliminate a negative exponent

1. Create a fraction

2. Move the term with the negative exponent into the numerator or denominator from where it is.

Simplify.

Example: $5^{-2} = \frac{5^{-2}}{1} = \frac{1}{5^2} = \frac{1}{25}$

Examples:

1) $5a^3b^{-2}$

$\frac{5}{1} \cdot \frac{a^3}{1} \cdot \frac{b^{-2}}{1}$

$\frac{5}{1} \cdot \frac{a^3}{1} \cdot \frac{1}{b^2}$

$\frac{5a^3}{b^2}$

(2) $\frac{1}{x^{-5}} = \frac{x^5}{1} = x^5$

Steps to simplify exponential expressions.

1. Seperate the terms
2. get rid of the negative exponents
3. bring everything down
4. multiply.

3) $\frac{n^{-5}}{m^2}$

$\frac{n^{-5}}{1} \cdot \frac{1}{m^2}$

$\frac{1}{n^5} \cdot \frac{1}{m^2}$

$\frac{1}{n^5 m^2}$

(4) $3s^3t^{-2}$ when $s=2, t=-3$

$\frac{3}{1} \cdot \frac{s^3}{1} \cdot \frac{t^{-2}}{1}$

$\frac{3}{1} \cdot \frac{s^3}{1} \cdot \frac{1}{t^2} = \frac{3s^3}{t^2}$

$\frac{3(2)^3}{(-3)^2} = \frac{3(8)}{(9)} = \frac{24 \div 3}{9 \div 3}$

$\frac{8}{3}$