ALGEBRA II
Chapter 5 section 1
Use Properties of Exponents
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<u>**FOCUS:**</u>
How do you simplify algebraic expressions with exponents?

<u>**VOCAB:**</u>
Scientific notation:

<u>**WARM – UP:**</u>

Simplify each expression.   Evaluate when x = 4 and y = -3

1. $(-2)^3$ _____   2. $5^2 - 3^4$ _____   3. $-5xy^2$ _____

4. A gigabyte is about 10^3 megabytes. A music player has 4 gigabytes of memory. About how many megabytes is this?

_____

<u>**NOTES:**</u>

Evaluate the expression. Tell which properties of exponents you used.

$(-3^2 \cdot 5)^3$ $(4^2)^3$ $(-8)(-8)^3$

$\left(\dfrac{2}{9}\right)^3$ $\left(\dfrac{1^4}{3^2}\right)^{-2}$

A Federal Reserve gold bar weighs 400 troy ounces. What is the weight of 250,000 of the gold bars?

Simplify the expression.

$w^5w^{-8}w^6$

$$\left(\frac{c}{d^{-4}}\right)^{-2}$$

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

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

$(7y^2z^5)(y^{-4}z^{-1})$

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

The radius of Jupiter is about 11 times greater than the radius of Earth. How many times as great as the Earth's volume is Jupiter's volume?

Let's see if you comprehended what we worked on in class…

Try _____ for homework