Announcements

Last call for MAP and word problem makeups - these need to be scheduled with me today.

Test on Wednesday during NC Check-In Time

Quiz retake on Wednesday after you finish your test

Unit Map

Last week → Exponential Form and Simplifying Powers & Evaluating Expressions

Friday → Zero and Negative Exponents

Monday → Multiplying and Dividing Powers & Power to a Power

Tuesday → Exponents Review Day

Wednesday → Exponents Test, Word Problems Retake, NC Check-Ins

Zero and Negative Exponents

2/1/2019

Pull out your Exponents Foldable
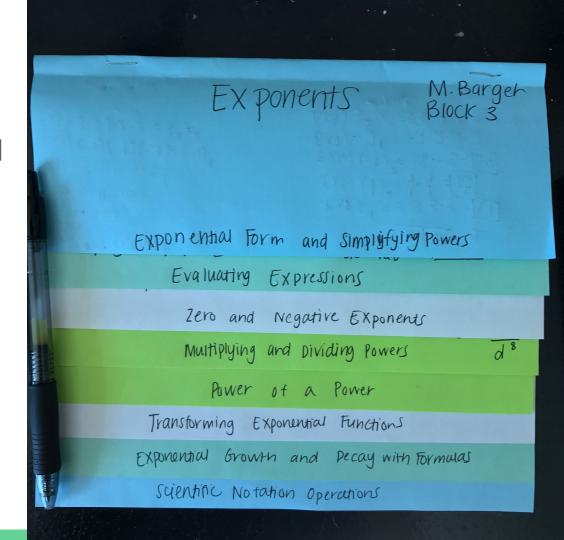
This foldable will be used

for this ENTIRE UNIT and

also for the next unit!!

Please do not lose this!

 Make sure your name is

on it!

EXPONENTS   M. Barger
                   Block 3

Exponential Form and Simplifying Powers

Evaluating Expressions

Zero and Negative Exponents

Multiplying and Dividing Powers d^8

Power of a Power

Transforming Exponential Functions

Exponential Growth and Decay with Formulas

Scientific Notation Operations

Zero and Negative Exponents

Zero and Negative Exponents

*Any <u>nonzero</u> number a, $a^0 = 1$ (any # to the zero power $= 1$)

* For any nonzero number a and integer n, $a^{-n} = \dfrac{1}{a^n}$ (switch the position to make exponent positive)

* Simplest form has only positive exponents

EX1) $(-5x)^0 = 1$

EX2) $-a^0 = -1$

EX3) $3b^0 = 3 \cdot 1 = 3$

EX4) $0^0 = $ not real (undefined)

EX5) $10^{-4} = \dfrac{10^{-4}}{1} = \dfrac{1}{10^4} = \dfrac{1}{10,000}$

EX6) $a^{-2}b^4 = \dfrac{a^{-2}b^4}{1} = \dfrac{b^4}{a^2}$

EX7) $\dfrac{a^3 b^{-1}}{d^{-4}} = \dfrac{a^3 d^4}{b}$

EX8) $\dfrac{2^{-2} b^2}{c^{-4}} = \dfrac{b^2 c^4}{4}$

EX9) $\left(\dfrac{2a}{5}\right)^{-2} = \left(\dfrac{5}{2a}\right)^2 = \dfrac{5}{2a} \cdot \dfrac{5}{2a} = \dfrac{25}{4a^2}$

Zero and Negative Exponents

Khan Academy Videos

https://www.khanacademy.org/math/in-in-grade-9-ncert/in-in-chapter-1-number-systems/in-in-laws-of-exponents-for-real-numbers/v/zero-negative-and-fractional-exponents - First 40 Seconds (zero exponents)

https://www.khanacademy.org/math/pre-algebra/pre-algebra-exponents-radicals/pre-algebra-negative-exponents/v/negative-exponents (negative exponents)

Homework Worksheet Posted Online