

# UNIT 1 - EXPONENTS

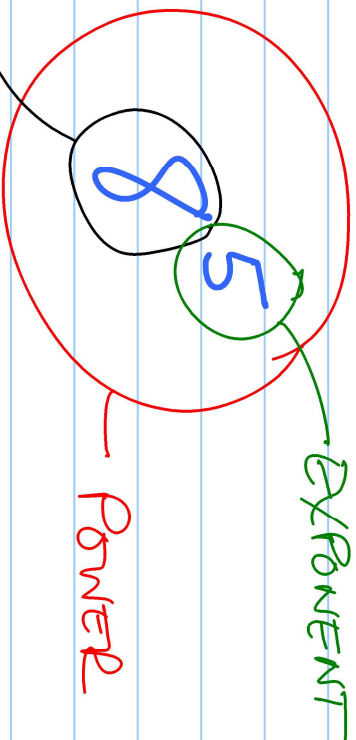
Note Title

1/30/2019

## Sec 1.3 Powers, Bases, & Coefficients

p. 20

ex)



BASE ——— EVEN EXPONENT MEANS + ANSWER

$$\text{ex) } (-2)^4 = (-2)(-2)(-2)(-2) = +16$$

\* B/C THE BRACKET SURROUNDS THE ENTIRE

-2, its -2 THAT REPEATS!

IN THE ABOVE EXAMPLE, Power =  $(-2)^4$

EXPONENT = 4

BASE = -2

EX)  $-2^4 = -2 \cdot 2 \cdot 2 \cdot 2 = -16$

$-1(2^4)$

Power =  $2^4$

\* B/C THERE ARE NO BRACKETS

AROUND THE -

BASE = 2

IT IS NOT INCLUDED IN THE POWER.

$$\begin{aligned} \text{ex)} \quad -(-2^4) &= -(-2 \cdot 2 \cdot 2 \cdot 2) = -(-16) \\ &= 16 \end{aligned}$$

$$\begin{aligned} \text{ex)} \quad -[-(-2)^4] &= -[(-2)(-2)(-2)(-2)] \\ &= -[16] \\ &= -16 \end{aligned}$$

$$= -16$$

WITH FRACTIONS :

$$\text{ex)} \left(\frac{1}{3}\right)^3 = \frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3} = \frac{1}{27}$$

"CUBED"

$$\text{ex)} \left(-\frac{2}{5}\right)^2 = \left(-\frac{2}{5}\right)\left(-\frac{2}{5}\right) = +\frac{4}{25}$$

"SQUARED"

$$\text{ex)} -\frac{3}{4}^4 = -\frac{3}{4} \cdot \frac{3}{4} \cdot \frac{3}{4} \cdot \frac{3}{4} = -\frac{81}{256}$$

$\frac{9}{16} \cdot \frac{9}{16}$

Try: 1)  $(-3)^2 = (-3)(-3) = 9$

2)  $-3^2 = -3 \cdot 3 = -9$

3)  $-(-3)^2 = -(-3)(-3) = -(9) = -9$

4)  $-(-3^2) = -(-3 \cdot 3) = -(-9) = 9$

HW: WORKSHEET 1,3