Feb.25th, 2016

Unit 3 Day 1
3-1 Exponential Form

Exponential Form: 5^3 ← exponent (base)

$5^3 = 5 \cdot 5 \cdot 5 = 125$ (NOT $5 \cdot 3 = 15$)

	Exponential Form	Expanded Form	Standard
1)	2^5	$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$	32
2)	$(-2)^5$	$(-2)(-2)(-2)(-2)(-2)$	-32
3)	$(-2)^4$	$(-2)(-2)(-2)(-2)$	16
4)	-2^4	$-2 \cdot 2 \cdot 2 \cdot 2$	-16
5)	$\left(\frac{1}{2}\right)^3$	$\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2}$ $\quad \frac{1}{2^3}$	$\frac{1}{8}$
6)	$\left(-\frac{2}{3}\right)^2$	$\left(-\frac{2}{3}\right)\left(-\frac{2}{3}\right)$	$\frac{4}{9}$

	Standard Form	Exponent Form
7)	27	3^3
8)	32	2^5
*9)	1296	6^4 $\quad (6^2)^2 = 36^2$
10)	100,000	10^5 (count 0's!)
11)	1024	$2^{10}, 4^5$ $\quad (2^2)^5$
12)	81	$3^4, 9^2$ $\quad (3^2)^2$

Evaluate in Standard Form

13) $(0.17)^2$

$= \left(\frac{17}{100}\right)^2$

$= \frac{289}{10000}$

14) $(2.\overline{2})^2$

$= \left(2\frac{2}{9}\right)^2$

$= \left(\frac{20}{9}\right)^2$

$= \frac{400}{81}$

15) $(-1.\overline{3})^4$

$= \left(-1\frac{1}{3}\right)^4$

$= \left(-\frac{4}{3}\right)^4$

$= \frac{256}{81}$

16) $-3^4 - (-1)^{20}$

$= -81 - 1$

$= -82$

Practice 3-1