9/14 Algebra 1 - Downing

Bellwork

Simplify $\sqrt{96}$

$\sqrt{96}$

$\sqrt{4}\ \sqrt{16}$

$\sqrt{2}\ \sqrt{3}\ \sqrt{4}\ \sqrt{4}$

$4\sqrt{6}$

$\sqrt{63}$

$\sqrt{3}\ \sqrt{21}$

$\sqrt{3}\ \sqrt{7}$

$3\sqrt{7}$

Go over HW

more practice

$\sqrt{160}$

$\sqrt{2}\ \sqrt{80}$

$\sqrt{2}\ \sqrt{40}$

$\sqrt{2}\ \sqrt{20}$

$\sqrt{2}\ \sqrt{10}$

$\sqrt{2}\ \sqrt{5}$

$2 \cdot 2\sqrt{2 \cdot 5}$

$4\sqrt{10}$

$2\sqrt{175}$

$\sqrt{5}\ \sqrt{35}$

$\sqrt{5}\ \sqrt{7}$

$2 \cdot 5\sqrt{7}$

$10\sqrt{7}$

$\sqrt{33}$

$\sqrt{3}\ \sqrt{11}$

$= \sqrt{33}$

Go over PC

2.5 C Multiplication Property of Exponents

Parts of Exponents

$3 \leftarrow$ Exponent

$X \leftarrow$ Base

Expanded Form: Exponents show repeated multiplication

Ex) $x^3 = x \cdot x \cdot x$

Recognizing the base

$5^3 = 5 \cdot 5 \cdot 5$ (5 is the base)

$-5^3 = (-1)5^3 = -1 \cdot 5 \cdot 5 \cdot 5$ (5 is the base)

$(-5)^3 = (-5)(-5)(-5)$ (-5 is the base)

$2x^4 = 2 \cdot x \cdot x \cdot x \cdot x$ (x is the base)

$(2x)^4 = (2x)(2x)(2x)(2x)$ (2x is the base

$xy^2z = x^1y^2z^1$

$4^3 = 4 \cdot 4 \cdot 4 = 64$ $\div 4$

$4^2 = 4 \cdot 4 = 16$ $\div 4$

$4^1 = 4$ $\div 4$

$4^0 = 1$

$4^{-1} = \frac{1}{4}$

$4^{-2} = \frac{1}{16}$ or $\frac{1}{4 \cdot 4} = \frac{1}{4^2}$

$4^{-3} = \frac{1}{64} = \frac{1}{4^3}$

Negative Exponents: If an exponent is negative:
Cross the line and change the sign!

Ex) $3^{-2} = \frac{1}{3^2} = \frac{1}{9}$

Ex) $\frac{1}{4^{-3}} = \frac{4^3}{1} = 64$

Ex) $2^{-4} = \frac{1}{2^4} = \frac{1}{16}$

No HW