Algebra 1

Chapter 7

Section 7-4

Jan 1-11:23 AM

Review: Simplify the fractions

$\frac{11}{11} = 1$

$\frac{6}{18} = \frac{1}{3}$

$\frac{2 \cdot 5}{2 \cdot 8} = \frac{5}{8}$

Jan 26-6:38 PM

Review: Simplify the variable expressions

$x \neq 0$ $\quad \frac{x}{x} = 1$

$$\frac{y^8}{y^3}$$

$$\frac{y \cdot y \cdot y \cdot y \cdot y \cdot y \cdot y \cdot y \cdot y \cdot y \cdot y}{y \cdot y \cdot y}$$

$$y^5$$

Jan 26-6:38 PM

Dividing Powers With the Same Base

Words To divide powers with the same base, subtract the exponents.

Algebra $\frac{a^m}{a^n} = a^{m-n}$, where $a \neq 0$ and m and n are rational numbers

Jan 29-8:18 AM

Simplify the variable expressions using positive exponents only

$\frac{n^{11}}{n^6}$

$n \cdot n \cdot n \cdot n \cdot n \cdot n \cdot n \cdot n \cdot n \cdot n \cdot n$
$n \cdot n \cdot n \cdot n \cdot n \cdot n$

n^5

* $n^{11-6} = n^5$

$\frac{r^{55}}{r^{35}}$

r^{55-35}

r^{20}

Jan 26-6:38 PM

Simplify the variable expressions using positive exponents only

$\frac{h^{15}}{h^{24}}$

h^{-9}

$\frac{1}{h^9}$

$\frac{k^{\frac{1}{6}}}{k^{\frac{2}{3}}}$

$k^{\frac{1}{6}-\frac{2}{3}}$ x2

$k^{\frac{1}{6}-\frac{4}{6}=-\frac{3}{6}=-\frac{1}{2}}$

$\frac{1}{k^{1/2}}$

Jan 26-6:38 PM

Simplify the variable expressions using positive exponents only

$\frac{n^5}{n^9}$ $\quad n^{-4}$ $\quad \frac{1}{n^4}$

$\frac{w^5s^2}{w^5s^3}$ $\quad s^{-1}$ $\quad \frac{1}{s}$

$\frac{g^5j^{17}}{g^{12}j^{11}}$ $\quad g^{5-12} \cdot j^{17-11}$ $\quad g^{-7} \cdot j^6$ $\quad \frac{j^6}{g^7}$

Jan 26-6:38 PM

Simplify the variable expressions using positive exponents only

$\left(\frac{3}{8}\right)^2$ $\quad \frac{3}{8} \cdot \frac{3}{8}$ $\quad \frac{3^2}{8^2} = \frac{9}{64}$

$\left(\frac{10}{3}\right)^3$ $\quad \frac{10}{3} \cdot \frac{10}{3} \cdot \frac{10}{3}$ $\quad \frac{10^3}{3^3} = \frac{1000}{27}$

Jan 26-6:38 PM

Raising a Quotient to a Power

Words To raise a quotient to a power, raise the numerator and the denominator to the power and simplify.

Algebra $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$, where $a \neq 0$, $b \neq 0$, and n is an rational number

Jan 30-8:46 AM

Simplify the variable expressions using positive exponents only

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

$\frac{(x^3)^6}{2^6}$

$\frac{x^{18}}{64}$

$\left(\frac{x^{-1}y^5}{3z}\right)^{-2}$

$\frac{(x^{-1}y^5)^{-2}}{(3z)^{-2}}$

$\frac{x^2 y^{-10}}{3^{-2} z^{-2}}$

$\frac{3^2 x^2 z^2}{y^{10}} = \frac{9x^2z^2}{y^{10}}$

Jan 26-6:38 PM