

Simplify, Then write as a radical

$$x^{\frac{1}{5}} \cdot x^{\frac{1}{2}}$$

~~$x^{\frac{1}{5} + \frac{1}{2}}$~~       $x^{\frac{7}{10}}$

Apr 7-7:37 AM

Simplify, Then write as a radical

$$\frac{x^{\frac{5}{6}}}{x^{\frac{1}{4}}}$$

~~$x^{\frac{5}{6} - \frac{1}{4}}$~~       $x^{\frac{7}{12}}$

May 19-10:00 AM

## 7.2 Day 3 Simplifying Rational Exponents and Roots finished

$\sqrt[3]{8}$ 2	$(8)^{\frac{1}{3}}$ 2
$\sqrt[5]{3125}$ 5	$(3125)^{\frac{1}{5}}$ 5
$\sqrt{121}$ 11	$(121)^{\frac{1}{2}}$ 11
$(\sqrt[4]{81})^3$ 27	$81^{\frac{3}{4}}$ 27


May 3-10:13 AM

**BIG Idea:**  
*Can you move back and forth between the two forms?!*

$$b^{\frac{m}{n}} = \sqrt[n]{b^m} = (\sqrt[n]{b})^m$$

Rational Exponent      Radicals

★ The *root* of the radical is the *root* in the fraction ★



$\sqrt{\quad} \Rightarrow (\quad)^{\frac{1}{2}}$

Jan 24-2:14 PM

## 7.2 Day 3 Simplifying Rational Exponents and Roots finished

Write each radical as a Rational Exponent

$$\sqrt[3]{7}$$

$$7^{\frac{1}{3}}$$

$$\sqrt[5]{x}$$

$$x^{\frac{1}{5}}$$

$$\sqrt{y}$$

$$y^{\frac{1}{2}}$$

Write each as a radical

$$4^{3/2}$$

$$\sqrt{4^3}$$

$$x^{4/5}$$

$$\sqrt[5]{x^4}$$

May 3-10:27 AM

Simplify

$$(9x^6)^{1/2}$$

$$\cancel{45x^2}$$

$$\begin{array}{l} 9^{1/2} x^2 \\ 3 x^2 \end{array}$$

Apr 7-7:33 AM

**7.2 LESSON**

$$\sqrt{9x^6}$$

$(9x^6)^{\frac{1}{2}}$

$9^{\frac{1}{2}} \times 6^{\frac{1}{2}}$

$3 \times 3$

Mar 28-9:44 AM

**6.2 LESSON C**

$$\sqrt[3]{8x^6y^3}$$

$(8 \times 6 \times 3)^{\frac{1}{3}}$

$8^{\frac{1}{3}} \times 6^{\frac{1}{3}} \times 3^{\frac{1}{3}}$

$2 \times 2 \times 2$

Jan 29-10:14 AM

## 6.2 LESSON C

$$\sqrt[3]{-8c^3d^6}$$

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## 6.2 LESSON C

$$\sqrt[3]{64x^3y^{12}z^6}$$

$$(64x^3y^{12}z^6)^{\frac{1}{3}}$$

$$4xy^4z^2$$

Mar 28-9:44 AM

# 6.2 LESSON C

$$\sqrt{121x^4y^2}$$

$$(121x^4y^2)^{\frac{1}{2}}$$

$$11x^2y$$

Jan 29-10:14 AM

$$\left(x^{\frac{2}{5}} \cdot x^{\frac{2}{3}}\right)^3$$

$$\left(x^{\frac{2}{5} + \frac{2}{3}}\right)^3$$

$$\sqrt[5]{x^{\frac{16}{5}}}$$

May 4-8:22 AM