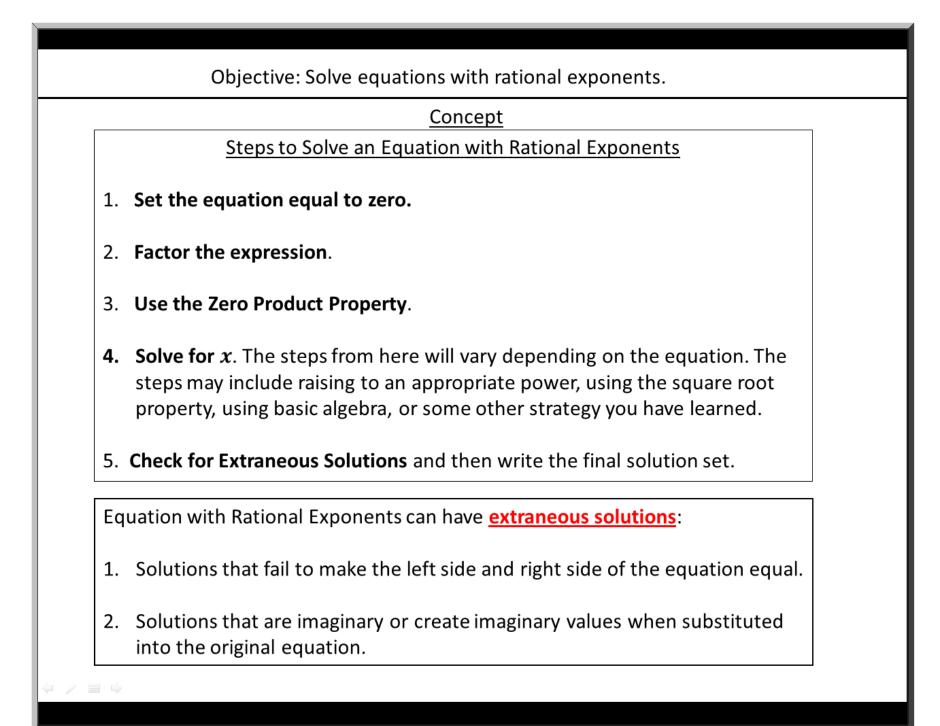
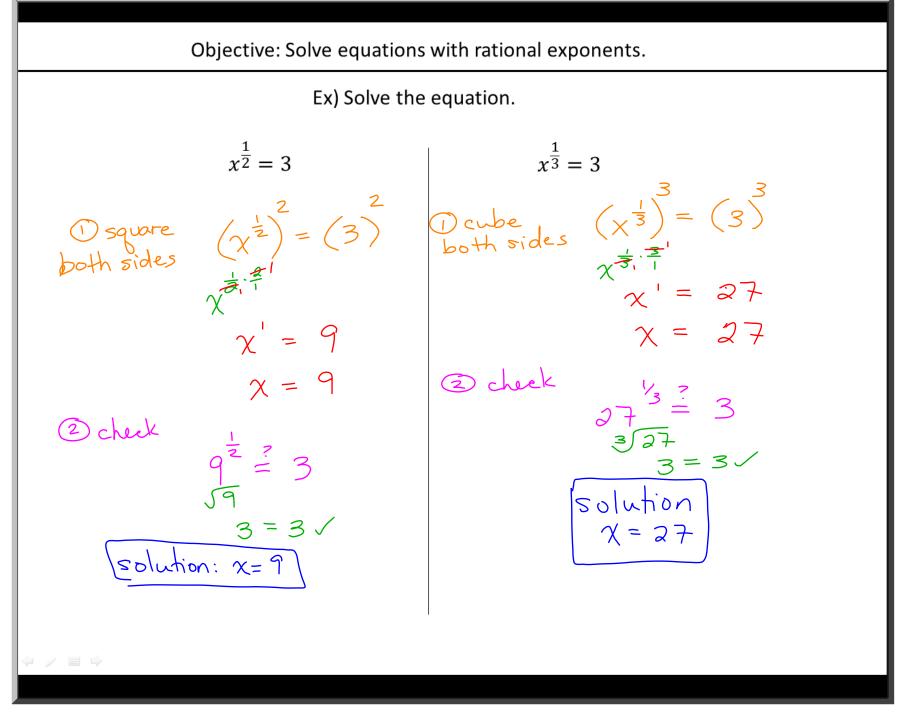
Objective: Solve equations with rational exponents.

Concept

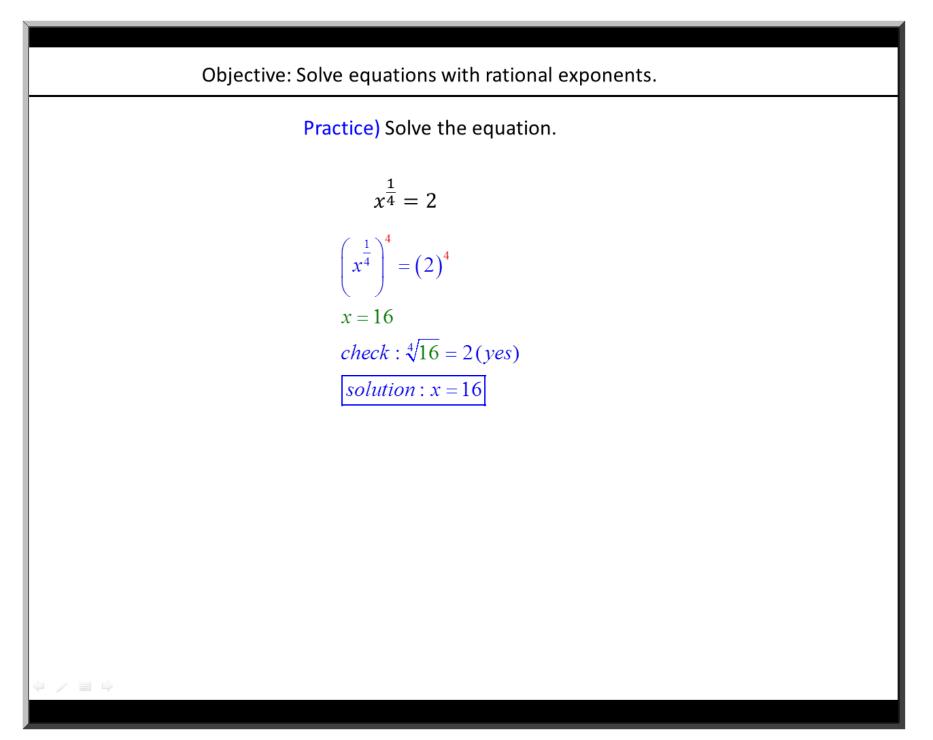
An equation with rational exponents is equivalent to a radical equation. When solving these equations it is usually easier to leave them in the original form rather than rewrite in radical form.

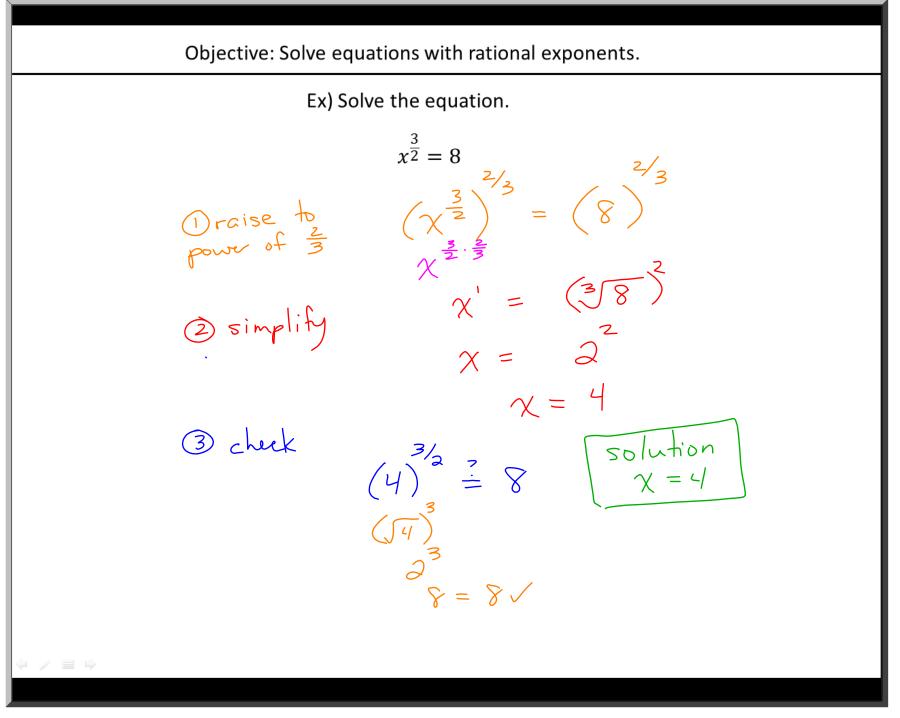
$$\frac{\text{Examples}}{x^{\frac{2}{3}} + 8x^{\frac{1}{2}} = 0} \qquad 9x - x^{\frac{1}{2}} = 0 \qquad x + x^{\frac{1}{2}} - 6 = 0$$

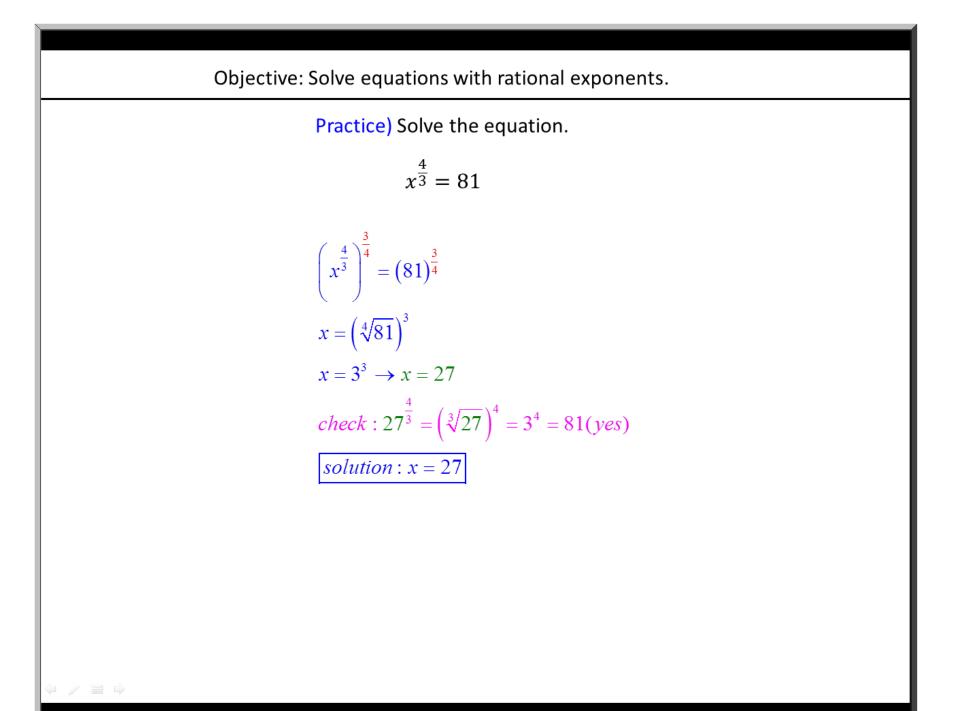




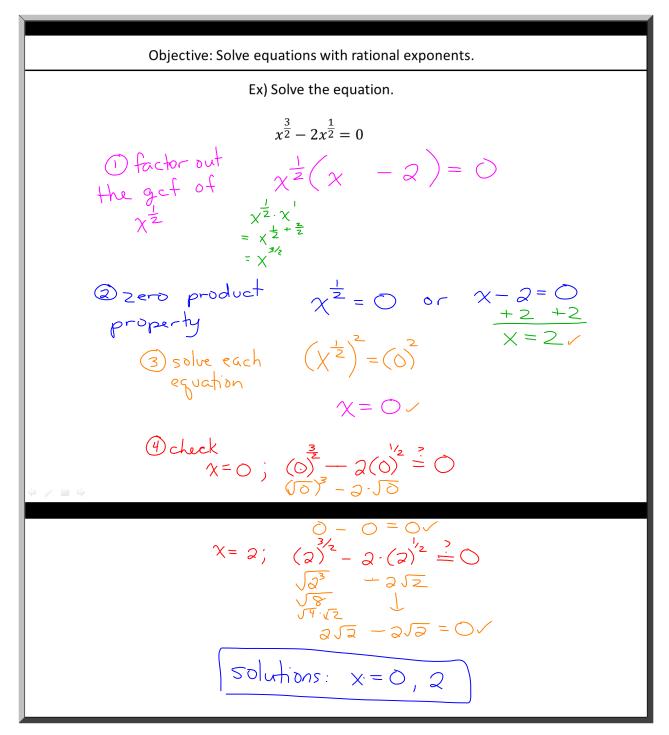
Captured on Mon Nov 27 2017 07:55:38





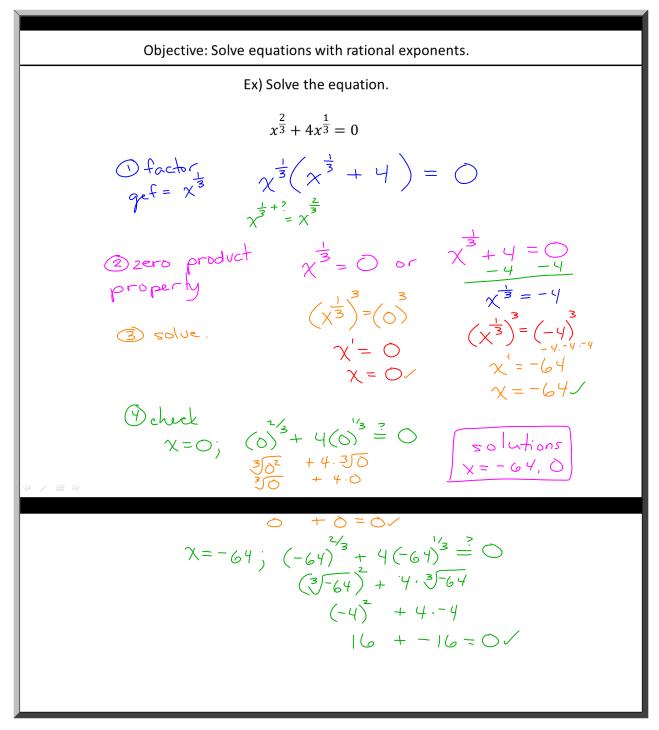


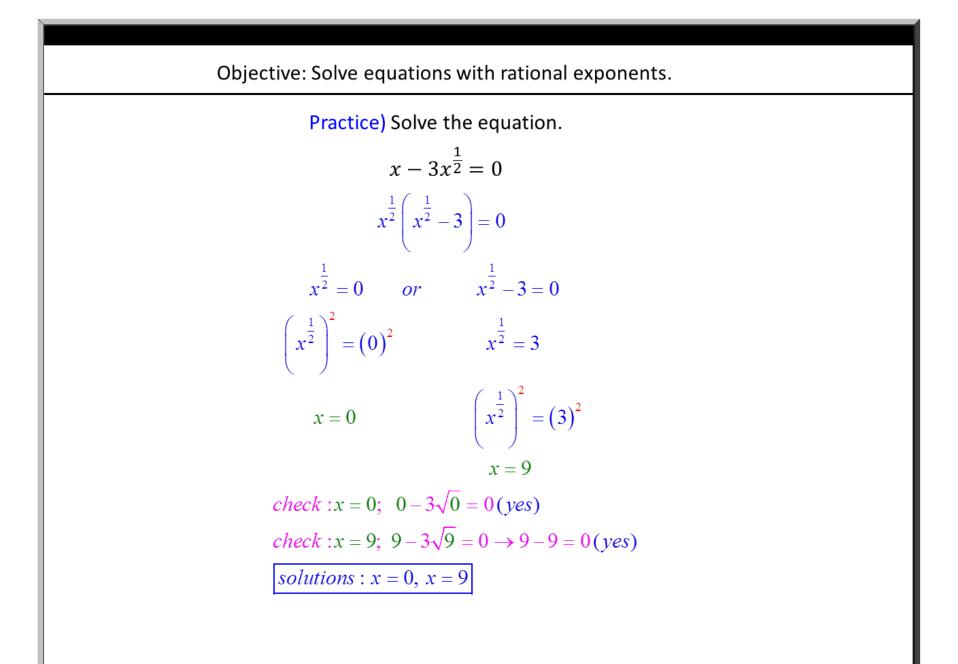
Acc Math 3 Solve Rational Exponent Equations.gwb - Wednesday, November 29, 2017 - Page 7 of 15



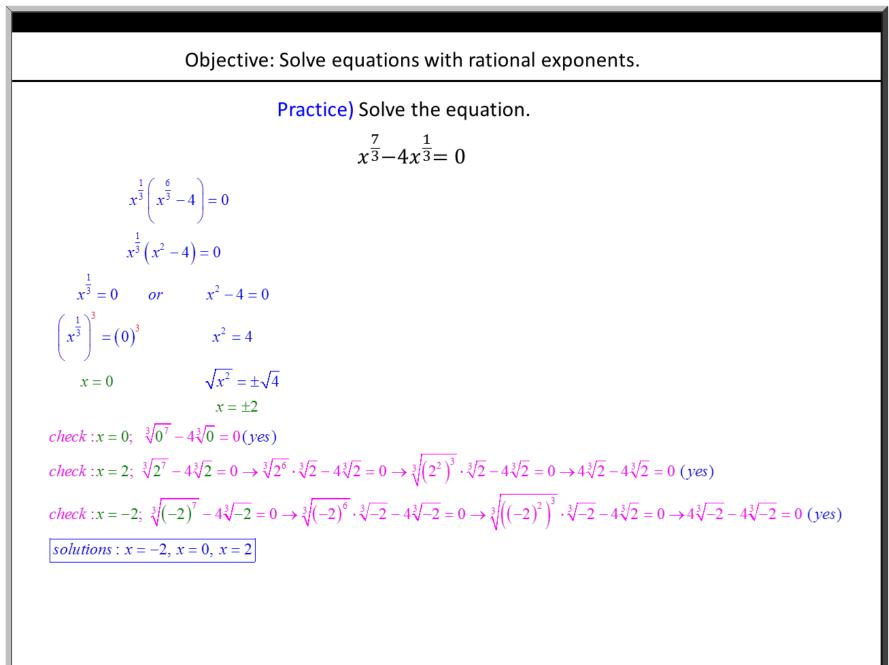
Captured on Mon Nov 27 2017 08:11:25

Acc Math 3 Solve Rational Exponent Equations.gwb - Wednesday, November 29, 2017 - Page 8 of 15



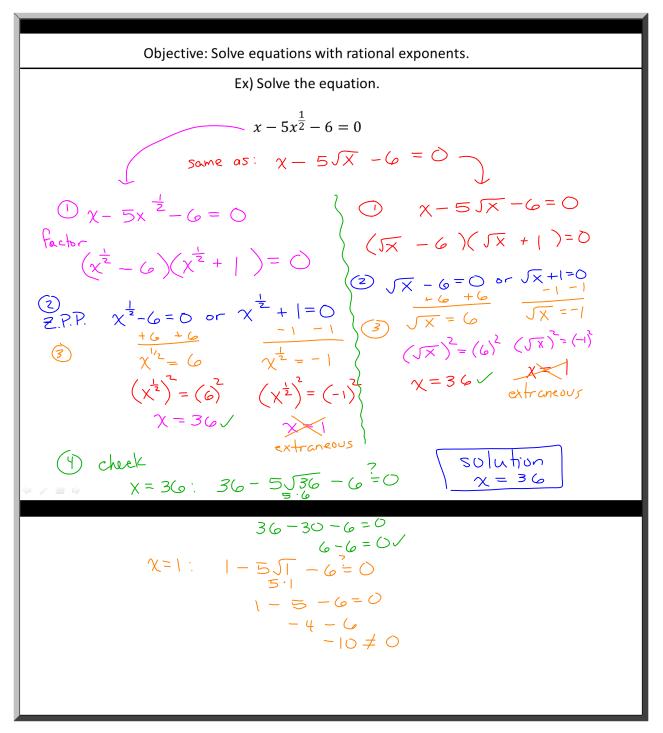


↓ ■ ⇒



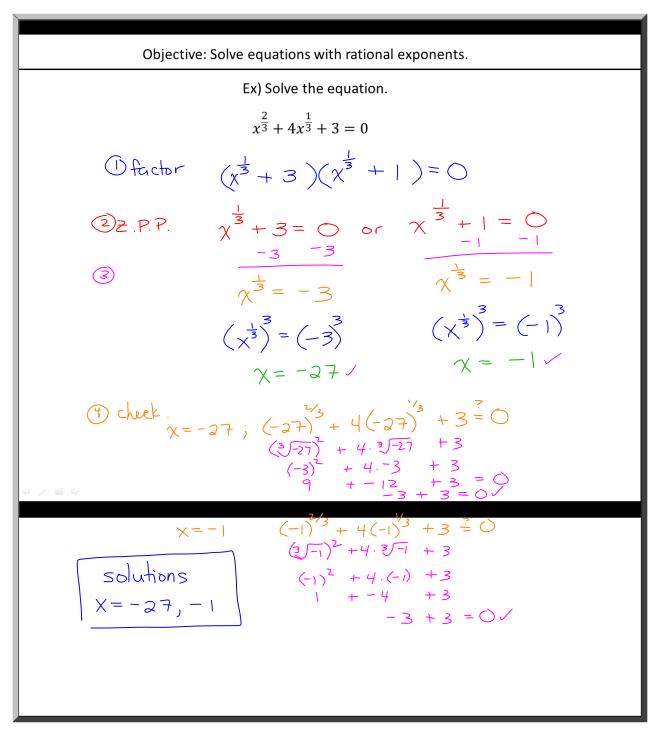
🔶 / 🖃 🌳

Acc Math 3 Solve Rational Exponent Equations.gwb - Wednesday, November 29, 2017 - Page 11 of 15

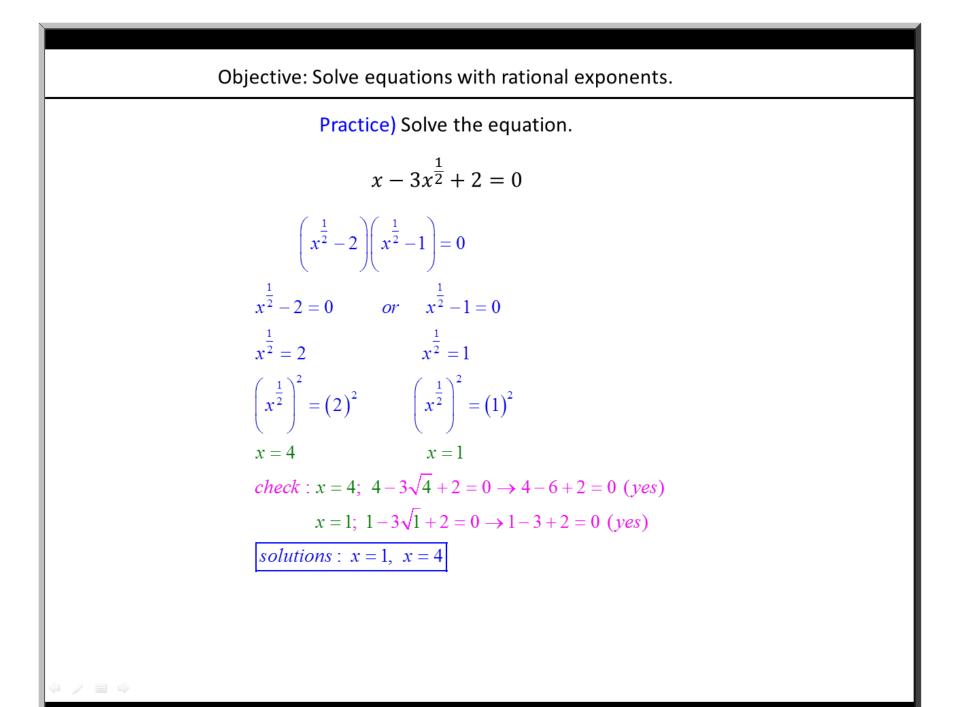


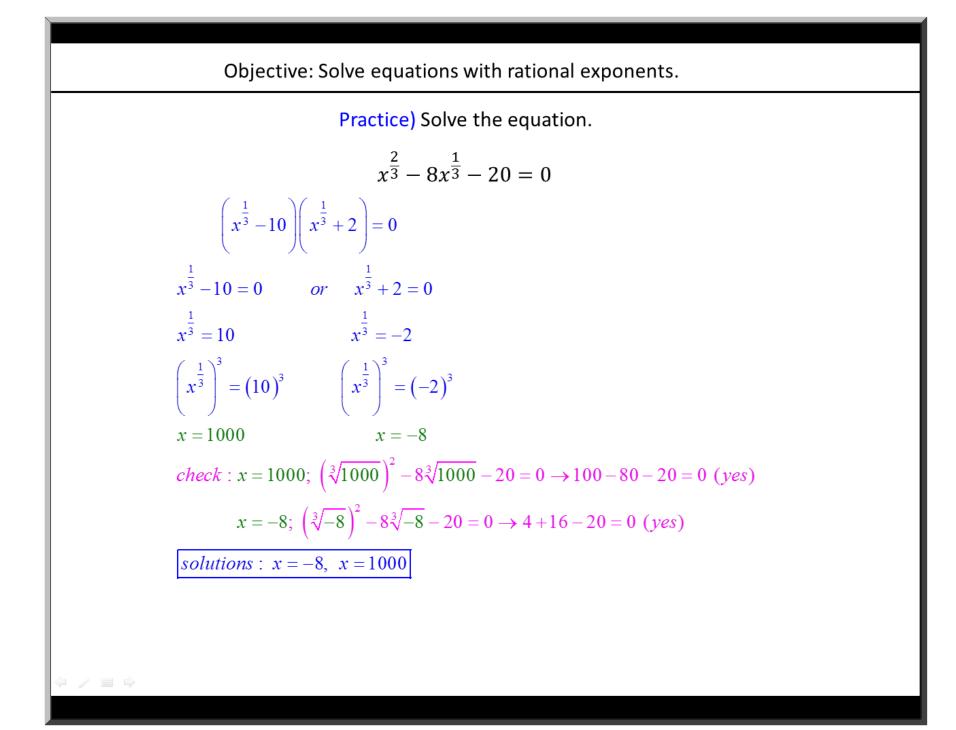
Captured on Wed Nov 29 2017 08:00:47

Acc Math 3 Solve Rational Exponent Equations.gwb - Wednesday, November 29, 2017 - Page 12 of 15



Captured on Wed Nov 29 2017 08:13:56





Objective: Solve equations with rational exponents.

<u>Closure</u>

A student solved an equation with rational exponents. The work is shown. Explain why the solution isn't correct and find the correct solution.

$$x^{\frac{1}{3}} = 8$$

$$\sqrt[3]{x^{\frac{1}{3}}} = \sqrt[3]{8}$$

$$x = 2$$

The solution isn't correct because $\sqrt[3]{x^{\frac{1}{3}}}$ isn't equal to x, $\sqrt[3]{x^{\frac{1}{3}}} = (x^{\frac{1}{3}})^{\frac{1}{3}} = x^{\frac{1}{9}}$. The correct solution is 512.

$$x^{\frac{1}{3}} = 8$$
$$\left(x^{\frac{1}{3}}\right)^{3} = (8)^{3}$$
$$x = 512$$