Intermediate Algebra B ***Name*** _____

Reteach 7.2: Roots, Radicals & Equations ***Hour 1 2 3 4 5***

7.2 I can demonstrate understanding of radical expressions and expressions with rational exponents.

Level 1:

1. Simplify. Leave your answer in rational exponent form.
   a. $\sqrt[3]{27x^9y^3}$ b. $\sqrt{25x^8y^{16}}$

2. Simplify. Leave your answer in rational exponent form.
   a. $(36x^8y^6)^{\frac{1}{2}}$ b. $(27a^9b^{15})^{\frac{2}{3}}$

3. Simplify. Write your answer in radical form.
   a. $x^{\frac{2}{3}} \cdot x^{\frac{6}{3}}$ b. $\frac{a^{\frac{3}{2}}}{a^{\frac{1}{6}}}$

4. Simplify. Write your answer in radical form.
   a. $\left(a^{\frac{1}{4}} \cdot a^{\frac{3}{2}}\right)^{\frac{3}{2}}$ b. $\left(\frac{x^{\frac{2}{3}}}{x^{\frac{2}{5}}}\right)^{\frac{1}{3}}$

5. Simplify. Leave your answer in rational exponent form.
   a. $\left(x^3y^{\frac{2}{3}}\right)\left(x^{\frac{1}{2}}y\right)$ b. $\left(x^{\frac{3}{4}}y^{\frac{1}{3}}\right)\left(x^{\frac{1}{3}}y^{\frac{2}{3}}\right)$

Intermediate Algebra B ***Name*** _____

Reteach 7.2: Roots, Radicals & Equations ***Hour 1 2 3 4 5***

7.2 I can demonstrate understanding of radical expressions and expressions with rational exponents.

Level 1:

6. Write the expressions in rational exponent form.

a. $\sqrt{x}$ b. $\sqrt[3]{y^7}$

7. Write the expressions in radical form.

b. $x^{\frac{3}{7}}$ b. $y^{\frac{7}{3}}$

Level 2/3:

Simplify completely.

8. $\sqrt[3]{\frac{-8x^3y^{12}}{x^3y^{15}}}$

9. $\frac{16x^{\frac{2}{3}}\ y^{\frac{1}{2}}}{4x^{\frac{4}{5}}\ y^{\frac{-2}{3}}}$

10. $\left(x^3y^{\frac{2}{3}}\right)^{\frac{4}{5}}\left(x^{\frac{1}{2}}y^{\frac{1}{5}}\right)$