

7.2B Rational Exponents HW  
Intermediate Algebra B

Name \_\_\_\_\_  
Period \_\_\_\_\_ Date \_\_\_\_\_

Rewrite each expression with a rational exponent.

1)  $\sqrt[3]{x}$

2)  $\sqrt[3]{y^2}$

3)  $(\sqrt[5]{m})^3$

Rewrite each expression in radical form.

4)  $a^{\frac{2}{3}}$

5)  $b^{\frac{5}{2}}$

6)  $2^{\frac{1}{2}}$

Evaluate each expression. Change forms first!

7)  $\sqrt[3]{64}$

9)  $\sqrt{4^5}$

8)  $(\sqrt[5]{243})^3$

10)  $\sqrt[4]{81^3}$

Simplify each expression using properties of exponents. Write your answer in **radical form when possible**.

11)  $x^{\frac{1}{4}} \cdot x^{\frac{1}{2}}$

13)  $(36x^4y^6)^{\frac{3}{2}}$

12)  $y^{\frac{2}{5}} \cdot y^{\frac{1}{10}}$

14)  $(x^{\frac{3}{4}} \cdot x^{\frac{2}{3}})^2$