8-6 Radical Expressions and Rational Exponents

✓ Lesson Quiz

Find all real roots.

1. fourth roots of 625

2. fifth roots of -243

Simplify each expression.

3. $\dfrac{16^{\frac{3}{4}}}{16^{\frac{1}{2}}}$

4. $\sqrt[4]{256y^8}$

5. Write $(-216)^{\frac{2}{3}}$ in radical form and simplify.

6. Write $\sqrt[3]{21^5}$ using rational exponents.

7. If \$2000 is invested at 4% interest compounded monthly, the value of the investment after t years is given by $2000\left(\dfrac{12.04}{12}\right)^{12t}$. What is the value of the investment after 3.5 years?

Holt Algebra 2

8-6 **Radical Expressions and Rational Exponents**

✓ Lesson Quiz

Find all real roots.

1. fourth roots of 625 **−5, 5**

2. fifth roots of −243 **−3**

Simplify each expression.

3. $\dfrac{16^{\frac{3}{4}}}{16^{\frac{1}{2}}}$ **2**

4. $\sqrt[4]{256y^8}$ **$4y^2$**

5. Write $(-216)^{\frac{2}{3}}$ in radical form and simplify. **$\left(\sqrt[3]{-216}\right)^2 = 36$**

6. Write $\sqrt[3]{21^5}$ using rational exponents. **$21^{\frac{5}{3}}$**

7. If \$2000 is invested at 4% interest compounded monthly, the value of the investment after t years is given by $2000\left(\frac{12.04}{12}\right)^{12t}$. What is the value of the investment after 3.5 years? **\$2300.01**