

## 5-7 Rational Exponents Practice

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

**Write each expression in radical form.**

1)  $4^{\frac{5}{3}}$

2)  $2^{\frac{1}{4}}$

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

4)  $7^{\frac{1}{2}}$

5)  $7^{\frac{1}{3}}$

**Write each expression in exponential form.**

6)  $(\sqrt{10})^3$

7)  $(\sqrt[5]{2})^8$

8)  $(\sqrt[5]{3})^2$

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

10)  $\sqrt{5}$

**Simplify.**

11)  $100^{\frac{3}{2}}$

12)  $64^{\frac{1}{6}}$

13)  $216^{\frac{2}{3}}$

14)  $81^{\frac{3}{2}}$

15)  $16^{\frac{3}{2}}$

16)  $(100x^2)^{\frac{1}{2}}$

17)  $(81n^2)^{\frac{1}{2}}$

18)  $(n^4)^{\frac{1}{2}}$

19)  $(243n^{10})^{\frac{2}{5}}$

20)  $(64n^6)^{\frac{1}{2}}$