nth Roots and Rational Exponents

1. Simplify each radical

$$\sqrt[3]{27}$$

2. Simplify each radical

$$\sqrt[3]{-8}$$

3. Simplify each radical

$$\sqrt[3]{\frac{27}{64}}$$

4. Use a calculator to write each expression as a decimal rounded to two decimal places

$$\sqrt[3]{73}$$

5. Use a calculator to write each expression as a decimal rounded to two decimal places

$$\sqrt[4]{3}$$

6. Simplify each radical

$$\sqrt[4]{5^4}$$

7. Simplify each radical

$$\sqrt[3]{n^3}$$

8. Simplify each radical

$$\sqrt[4]{(5x-1)^4}$$

9. Simplify each radical

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

10. Evaluate each expression

$$9^{\frac{1}{2}}$$

11. Evaluate each expression

$$-256^{\frac{1}{4}}$$

12. Evaluate each expression

$$(-16)^{\frac{1}{2}}$$

13. Rewrite each of the following radicals with a rational exponent

$$\sqrt[5]{3y}$$

14. Rewrite each of the following radicals with a rational exponent

$$\sqrt{\frac{y}{5}}$$

15. Evaluate each expression

$$16^{\frac{5}{2}}$$

16. Evaluate each expression

$$8^{\frac{2}{3}}$$

17. Evaluate each expression

$$64^{\frac{-1}{2}}$$

18. Evaluate each expression

$$\frac{1}{9^{\frac{-3}{2}}}$$

19. Rewrite each of the following radicals with a rational exponent

$$\sqrt[4]{x^7}$$

20. Rewrite each of the following radicals with a rational exponent

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

21. Use a calculator to write each expression as a decimal rounded to two decimal places

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