PROBLEM SET 7-1

(Radical Functions and Rational Exponents)

Find each real-number root.

1. $\sqrt{36}$ **2.** $-\sqrt{36}$ **3.** $\sqrt{-36}$ **4.** $\sqrt{0.36}$

5. $-\sqrt[3]{64}$ **6.** $\sqrt[3]{-64}$ **7.** $-\sqrt[4]{81}$ **8.** $\sqrt[4]{-81}$

Simplify each radical expression.

9. $\sqrt{16x^2}$ **10.** $\sqrt{0.25x^6}$ **11.** $\sqrt{x^8y^{18}}$ **12.** $\sqrt{64b^{48}}$

13. $\sqrt[3]{-64a^3}$ **14.** $\sqrt[3]{27y^6}$ **15.** $\sqrt[4]{x^8y^{12}}$ **16.** $\sqrt[5]{32y^{10}}$

17. $\sqrt[3]{\frac{8}{216}}$ **18.** $\sqrt[4]{\frac{1}{256}}$ **19.** $\sqrt[3]{81x^3y^6}$ **20.** $\sqrt[5]{-y^{20}}$

21. $\sqrt{(x+1)^4}$ **22.** $\sqrt[2n]{x^{2n}}$ **23.** $\sqrt[2n]{x^{4n}}$ **24.** $\sqrt[2n]{x^{6n}}$