

**7-4 Skills Practice*****n*th Roots**

Use a calculator to approximate each value to three decimal places.

1.  $\sqrt{230}$

2.  $\sqrt{38}$

3.  $-\sqrt{152}$

4.  $\sqrt{5.6}$

5.  $\sqrt[3]{88}$

6.  $\sqrt[3]{-222}$

7.  $-\sqrt[4]{0.34}$

8.  $\sqrt[5]{500}$

**Simplify.**

9.  $\pm\sqrt{81}$

10.  $\sqrt{144}$

11.  $\sqrt{(-5)^2}$

12.  $\sqrt{-5^2}$

13.  $\sqrt{0.36}$

14.  $-\sqrt{\frac{4}{9}}$

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

16.  $-\sqrt[3]{27}$

17.  $\sqrt[3]{0.064}$

18.  $\sqrt[5]{32}$

19.  $\sqrt[4]{81}$

20.  $\sqrt{y^2}$

21.  $\sqrt[3]{125s^3}$

22.  $\sqrt{64x^6}$

23.  $\sqrt[3]{-27a^6}$

24.  $\sqrt{m^8n^4}$

25.  $-\sqrt{100p^4q^2}$

26.  $\sqrt[4]{16w^4v^8}$

27.  $\sqrt{(-3c)^4}$

28.  $\sqrt{(a+b)^2}$

**7-5****Skills Practice****Operations with Radical Expressions****Simplify.**

1.  $\sqrt{24}$

2.  $\sqrt{75}$

3.  $\sqrt[3]{16}$

4.  $-\sqrt[4]{48}$

5.  $4\sqrt{50x^5}$

6.  $\sqrt[4]{64a^4b^4}$

7.  $\sqrt[3]{-\frac{1}{8}d^2f^5}$

8.  $\sqrt{\frac{25}{36}s^2t}$

9.  $-\sqrt{\frac{3}{7}}$

10.  $\sqrt[3]{\frac{2}{9}}$

11.  $\sqrt{\frac{2g^3}{5z}}$

12.  $(3\sqrt{3})(5\sqrt{3})$

13.  $(4\sqrt{12})(3\sqrt{20})$

14.  $\sqrt{2} + \sqrt{8} + \sqrt{50}$

15.  $\sqrt{12} - 2\sqrt{3} + \sqrt{108}$

16.  $8\sqrt{5} - \sqrt{45} - \sqrt{80}$

17.  $2\sqrt{48} - \sqrt{75} - \sqrt{12}$

18.  $(2 + \sqrt{3})(6 - \sqrt{2})$

19.  $(1 - \sqrt{5})(1 + \sqrt{5})$

20.  $(3 - \sqrt{7})(5 + \sqrt{2})$

21.  $(\sqrt{2} - \sqrt{6})^2$

22.  $\frac{3}{7 - \sqrt{2}}$

23.  $\frac{4}{3 + \sqrt{2}}$

24.  $\frac{5}{8 - \sqrt{6}}$