

## Practice

**Square Roots and Real Numbers**

**Find each square root. Use a calculator if necessary. Round to the nearest hundredth if the result is not a whole number or a simple fraction.**

1.  $\sqrt{144}$

2.  $\sqrt{225}$

3.  $-\sqrt{0.06}$

4.  $-\sqrt{\frac{100}{49}}$

5.  $\sqrt{\frac{1}{16}}$

6.  $\pm\sqrt{1444}$

7.  $\pm\sqrt{2.2}$

8.  $-\sqrt{1.44}$

9.  $\sqrt{0.0625}$

10.  $-\sqrt{\frac{4}{289}}$

11.  $\sqrt{3.06}$

12.  $\pm\sqrt{2401}$

13.  $-\sqrt{4900}$

14.  $\sqrt{\frac{3136}{25}}$

15.  $-\sqrt{11.4}$

16.  $\sqrt{3364}$

17.  $\sqrt{0.906}$

18.  $-\sqrt{22.58}$

19.  $\pm\sqrt{8376}$

20.  $-\sqrt{\frac{1}{196}}$

21.  $-\sqrt{59,312}$

**Evaluate each expression. Use a calculator if necessary. Round to the nearest hundredth if the result is not a whole number.**

22.  $-\sqrt{a}$ , if  $a = 400$

23.  $\sqrt{b}$ , if  $b = 313$

24.  $\sqrt{st}$ , if  $s = 10$  and  $t = 22$

25.  $-\sqrt{m+n}$ , if  $m = 12$  and  $n = 4$

26.  $\sqrt{c+d}$ , if  $c = 33$  and  $d = 51$

27.  $\sqrt{de}$ , if  $d = 19$  and  $e = 6$

28.  $-\sqrt{\frac{16}{a}}$ , if  $a = 16$

29.  $\pm\sqrt{b-a}$ , if  $b = 6$  and  $a = 2$

30.  $\sqrt{mn}$ , if  $m = 45$  and  $n = 3$

31.  $-\sqrt{d+e}$ , if  $d = 0$  and  $e = 9$

**Name the set or sets of numbers to which each real number belongs. Use  $N$  for natural numbers,  $W$  for whole numbers,  $Z$  for integers,  $Q$  for rational numbers, and  $I$  for irrational numbers.**

32.  $-\sqrt{1849}$

33.  $\sqrt{29}$

34.  $-\frac{2}{5}$

35.  $0.676767 \dots$

36.  $-2$

37.  $\frac{0}{2}$

38.  $0.333333 \dots$

39.  $\sqrt{93}$

40.  $-20$