

Approximating Square Roots

Approximate each square root to the nearest 10th.

1) $\sqrt{200}$
 $\begin{array}{r} 14 \quad 15 \\ \hline 196 \quad 225 \end{array}$
 (104) (75) ≈ 14.7

2) $\sqrt{136}$
 $\begin{array}{r} 11 \quad 12 \\ \hline 121 \quad 144 \end{array}$
 (15) (8) ≈ 11.6

3) $\sqrt{7}$
 $\begin{array}{r} 2 \quad 3 \\ \hline 4 \quad 9 \end{array}$
 (3) (2) ≈ 2.8

4) $\sqrt{74}$
 $\begin{array}{r} 8 \quad 9 \\ \hline 64 \quad 81 \end{array}$
 (10) (7) ≈ 8.6

5) $\sqrt{116}$
 $\begin{array}{r} 10 \quad 11 \\ \hline 100 \quad 121 \end{array}$
 (16) (5) ≈ 10.5

6) $\sqrt{119}$
 $\begin{array}{r} 10 \quad 11 \\ \hline 100 \quad 121 \end{array}$
 (19) (2) ≈ 10.8

7) $\sqrt{188}$
 $\begin{array}{r} 13 \quad 14 \\ \hline 169 \quad 196 \end{array}$
 (19) (8) ≈ 13.7

8) $\sqrt{12}$
 $\begin{array}{r} 3 \quad 4 \\ \hline 9 \quad 16 \end{array}$
 (3) (4) ≈ 3.3

9) $\sqrt{47}$ ≈ 6.8

36 49

(11) (2)

10) $\sqrt{65}$ ≈ 8.1

64 81

(8) (16)

11) $\sqrt{181}$ ≈ 13.4

169 196

(17) (15)

12) $\sqrt{16}$ ≈ 6.1

16 25

(0) (9)

13) $\sqrt{192}$ ≈ 13.7

169 196

(23) (4)

14) $\sqrt{194}$ ≈ 13.8

169 196

(25) (2)

15) $\sqrt{195}$ ≈ 13.9

169 196

(26) (1)

16) $\sqrt{189}$ ≈ 13.7

169 196

(20) (7)

17) $\sqrt{8}$ ≈ 2.9

4 9

(4) (1)

18) $\sqrt{95}$ ≈ 9.6

81 100

(14) (5)