1.6 Square Roots

▶ **GOAL: Estimate and calculate the square root of a whole number.**

1. Use mental math to calculate each square root.

   a) $\sqrt{9}$ = _____ e) $\sqrt{81}$ = _____

   b) $\sqrt{25}$ = _____ f) $\sqrt{121}$ = _____

   c) $\sqrt{49}$ = _____ g) $\sqrt{400}$ = _____

   d) $\sqrt{64}$ = _____ h) $\sqrt{3600}$ = _____

2. Estimate each square root to one decimal place. The first one is done for you.

   a) $\sqrt{15}$

   3 x 3 = 9, and 4 x 4 = 16, so 3.9 x 3.9 ≈ 15

   $\sqrt{15} \doteq 3.9$

   (The $\doteq$ symbol means "approximately equal.")

   b) $\sqrt{65}$

   c) $\sqrt{24}$

   d) $\sqrt{102}$

   e) $\sqrt{10}$

   f) $\sqrt{35}$

3. Calculate each square root using a calculator. Round to three decimal places.

   a) $\sqrt{19}$ = _____ c) $\sqrt{85}$ = _____ e) $\sqrt{737}$ = _____

   b) $\sqrt{33}$ = _____ d) $\sqrt{138}$ = _____ f) $\sqrt{488}$ = _____

4. A square field has an area of 625 m^2. What are its dimensions?

At-Home Help

A **square root** is one of two equal factors of a number. For example, the square root of 100 is represented as $\sqrt{100}$ and is equal to 10, because 10×10 or $10^2 = 100$.

If you have a TI-15 calculator, use this key sequence to calculate the square root of 100:

√ 100 (=

If you have a different kind of calculator, use this key sequence:

100 √