

**guided practice**

NAME \_\_\_\_\_

**Module 18** Solving Radical Equations  
**Lesson 3** Solving Problems Using Radical Equations

**Set 1**

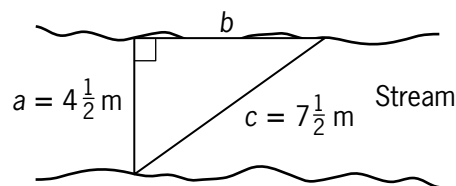
1. The time in seconds,  $T$ , it takes for an object to fall a given distance in feet,  $d$ , can be found using the formula  $T = \sqrt{\frac{d}{16}}$ . An object was dropped from a bridge and hit the water 3.8 seconds later. Find how far the object fell to the nearest foot.

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2. The time elapsed during one complete swing of a pendulum can be found using the formula  $T = 6.28\sqrt{\frac{l}{32}}$ . In this formula,  $T$  is the time in seconds, and  $l$  is the length in feet of the pendulum. What is length of a pendulum that makes one swing in 2.5 seconds?

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3. A fisherman traveled due north  $4\frac{1}{2}$  meters from his fishing spot to the opposite bank of a stream. He then headed due east and walked upstream, parallel to the stream, until the distance from his original spot was  $7\frac{1}{2}$  meters. How far did the fisherman walk upstream? Use the formula  $c = \sqrt{a^2 + b^2}$ , where  $c$  is the length of the hypotenuse and  $a$  and  $b$  are the lengths of the legs.



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