Name: _____
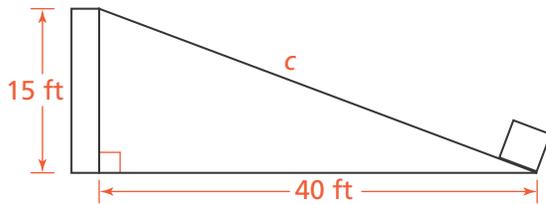
7-3 Additional Practice

Leveled Practice In **1** and **2**, use the Pythagorean Theorem to solve.

1. A shipping company uses an inclined conveyor belt to load and unload packages. The dock is 15 feet above the ground. The base of the conveyor belt is 40 feet from the dock. What is the length of the conveyor belt? Round to the nearest tenth of a foot.

$a^2 + b^2 = c^2$

$$\boxed{}^2 + \boxed{}^2 = \boxed{}^2$$

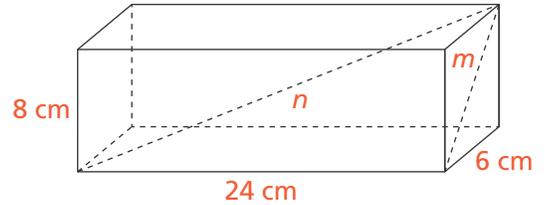$$\boxed{} + \boxed{} = \boxed{}$$

$$\boxed{} = \boxed{}$$

$$\boxed{} \approx \boxed{}$$

The length of the conveyor belt is about $\boxed{}$ feet.

2. Find the missing lengths in the rectangular prism.

$a^2 + b^2 = c^2$

$$\boxed{}^2 + \boxed{}^2 = \boxed{}^2$$

$$\boxed{} + \boxed{} = \boxed{}$$

$$\boxed{} = \boxed{}$$

$$\boxed{} = \boxed{}$$

$a^2 + b^2 = c^2$
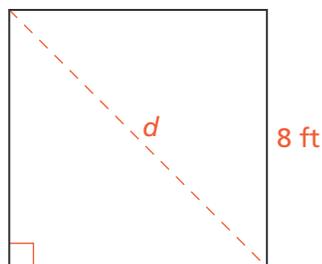
$$\boxed{}^2 + \boxed{}^2 = \boxed{}^2$$

$$\boxed{} + \boxed{} = \boxed{}$$

$$\boxed{} = \boxed{}$$

$$\boxed{} = \boxed{}$$

3. A square table in the cafeteria has the dimensions shown. What is the length of the diagonal of the table? Round to the nearest hundredth of a foot.

4. Reasoning What is the measurement of the longest line segment in a right rectangular prism that is 26 inches long, 2 inches wide, and 2 inches tall? Round to the nearest tenth of an inch. Ⓒ MP.2

5. Make Use of Structure Li needs to find the height of the rectangular prism, x. He knows that $d = 15$ mm. If he also knows the measure of line a, can he find the measure of x? Explain. © MP.7
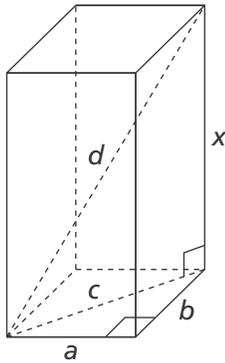

6. Sasha is building a tree house. The walls are 6.5 feet tall and she is using a brace to hold up the wall while she nails it to the floor. The brace is 8 feet long and she has positioned it 5 feet from the wall. Does her wall meet the floor at a right angle? Explain.

7. Higher Order Thinking An eight-sided game piece is shaped like two identical square pyramids attached at their bases. The perimeters of the square bases are 80 millimeters, and the slant height of each pyramid is 17 millimeters. What is the length of the game piece? Round to the nearest tenth of a millimeter.

© **Assessment Practice**

8. Which measurements are the dimensions of the prism to the nearest whole number?
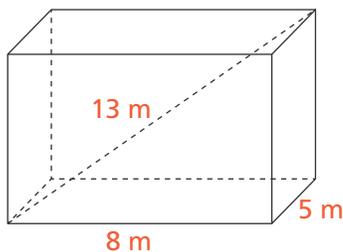
Ⓐ 5 m × 8 m × 8 m

Ⓑ 5 m × 8 m × 9 m

Ⓒ 5 m × 8 m × 10 m

Ⓓ 5 m × 8 m × 11 m

9. Carlos is making a wood picture frame. The picture frame is 11 inches by 14 inches. After nailing the frame together, Carlos measures the diagonal. If the diagonal is 19 inches long, does the frame have 90° corners? Explain.