Name: _____

7-1 Additional Practice

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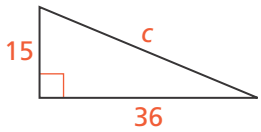
Leveled Practice **In 1 and 2, find the missing side length of each triangle.**

1.



$\square^2 + 36^{\square} = c^2$

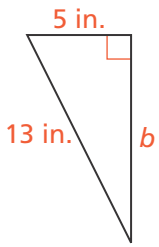
$\square + \square = c^2$

$\sqrt{\square} = \sqrt{\square}$

$c = \square$

The length of the hypotenuse is $\square$ units.

2.



$\square^2 + b^2 = \square^2$

$\square + b^2 = \square$

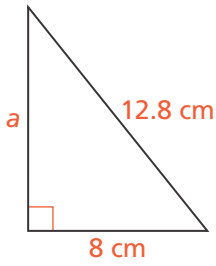
$b^2 = \square$

$\sqrt{\square} = \sqrt{\square}$

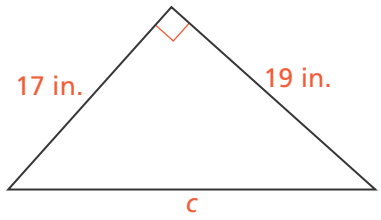
$b = \square$

The length of leg b is $\square$ inches.

3. What is the length of side a rounded to the nearest tenth of a centimeter?



4. What is the length of side c rounded to the nearest tenth of an inch?

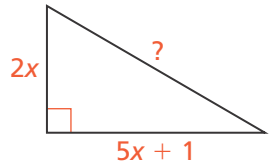


5. Two dimensions of a right triangle are 5 units and 13 units. A student writes the equation $5^2 + 13^2 = c^2$ to find the length of the third side.

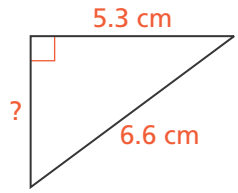
a. If all the side lengths are integers, is the student's equation correct? Explain.

b. If the student is incorrect, write an equation that will give the length of the third side, and show that the equation is correct.

6. What is the length of the hypotenuse of the triangle when $x = 3$? Round your answer to the nearest tenth.



7. A student was asked to find the length of the unknown leg of the right triangle. The student incorrectly said that the length of the unknown leg of the right triangle is about 6.2 centimeters.



a. Find the length of the unknown leg of the right triangle to the nearest tenth of a centimeter.

b. What mistake might the student have made?

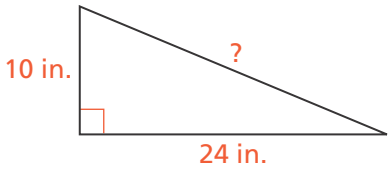
8. Higher Order Thinking Dillon places a ladder against a wall. The base of the ladder is 5 feet from the wall. The ladder is 12 feet long.

a. How high will the ladder reach?

b. How will shortening the distance between the base of the ladder and the wall affect the dimensions of the triangle they form? Explain in terms of the Pythagorean Theorem.

Assessment Practice

9. What is the length of the hypotenuse of the right triangle?



10. What is the length of the unknown leg of the right triangle rounded to the nearest tenth of a meter?