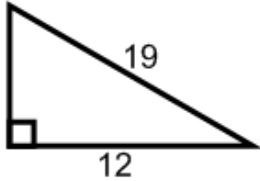
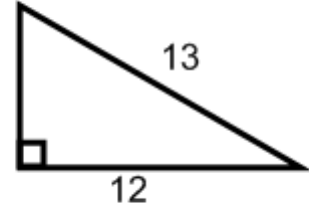


Applying Pythagorean TheoremFind the missing leg. Round to the nearest tenth if necessary.

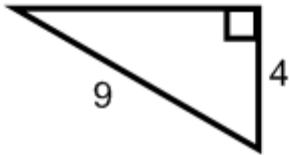
1.



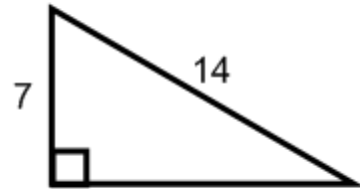
2.



3.



4.



5. $a = 9$, $b = ?$, $c = 41$

6. $a = ?$, $b = 35$, $c = 37$

Solve the following problems. Include a diagram for each problem.

7. The bottom of a ladder must be placed 3 feet from a wall. The ladder is 12 feet long. How far above the ground does the ladder touch the wall?

Applying Pythagorean Theorem

Draw a sketch to represent the situation, find the right triangle and use as a model.

8. A soccer field is a rectangle 90 meters wide and 120 meters long. The coach asks players to run from one corner to the corner diagonally across. What is this distance?

9. How far from the base of the house do you need to place a 15-foot ladder so that it exactly reaches the top of a 12-foot tall wall?

10. What is the length of the diagonal of a 10 cm by 15 cm rectangle?

11. A disabled ship radios to shore for help. The Coast Guard determines that the ship is 16 miles east and 43 miles north of the station.

What is the direct distance between the ship and the Coast Guard station?

Round answer to the nearest whole number.