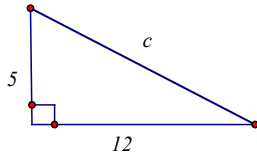# Pythagorean Theorem

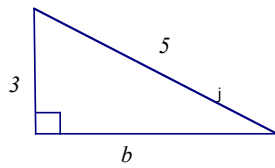## Strategy

Use $c^2 = a^2 + b^2$ to find the missing lengths. C, (hypotenuse) is the side opposite the right angle.
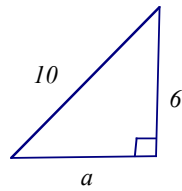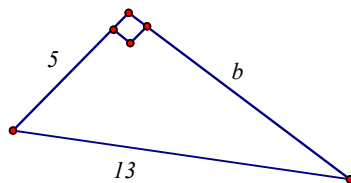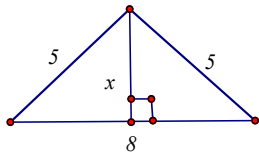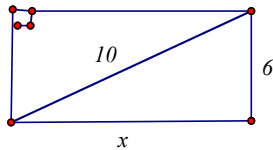
1.

2.

3.

4.

5.

6

7. Suppose the foot of a 12-foot ladder was placed 4 feet from the building. How high up on the building would the top of the ladder reach?

8. A ship is 24 miles east of a port. How far north must the ship sail to reach a point, which is 25 miles from the port?

9. A telephone pole is braced by a guy wire as shown. How high up on the pole is the wire fastened?

34 ft

16 ft