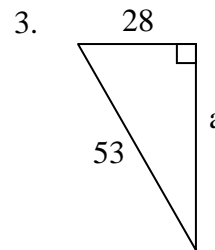
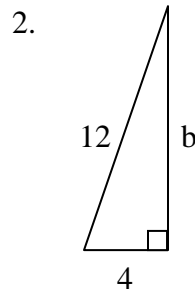
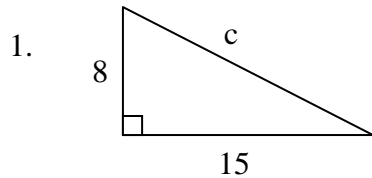


# Algebra I

## Pythagorean Theorem

Find the length of each missing side. Round answers to the nearest hundredth, if necessary.



Use an equation to solve each of the following problems. Round answers to the nearest hundredth, if necessary.

- An 11-foot ladder is leaning against a building with its base 3 feet from the base of the building. How far up the side of the building does the top of the ladder touch the building?
- An airplane travels due west 80 miles, then it travels due north 58 miles. How far is the airplane from its starting point?
- A 9-foot tall tree casts a shadow that is 14 feet long. How far is it from the end of the shadow to the top of the tree?
- If a television screen measures 24 inches high and 18 inches wide, what size television is it? (Hint: The size of a television is measured by the length of the diagonal of the screen.)
- Lisa wants to find the distance from her the edge of her flower garden to the top of the flagpole. If the flagpole is 35 feet tall and the edge of the flower garden is 20 feet from the flagpole, how far is it from the edge of Lisa's flower garden to the top of the flagpole?
- A baseball diamond is a square with sides that are 90 feet. What is the shortest distance between home plate and second base?
- Jeff wants to swim across a river that is 500 yards wide. He begins swimming perpendicular to the shore he started from; but due to the current, he ends up 150 yards down river from where he began. How far did Jeff actually swim from his starting point?