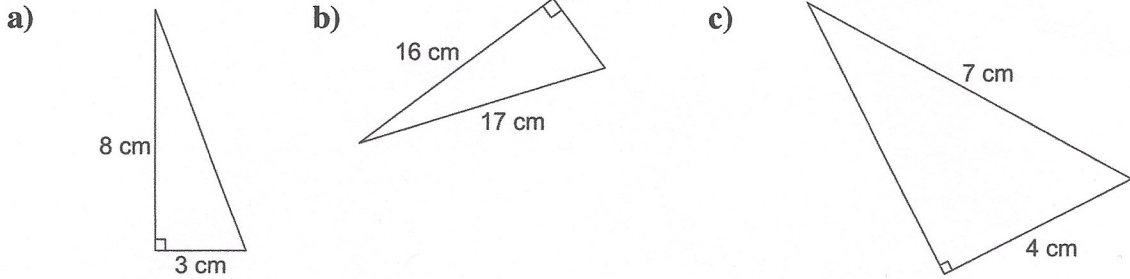


Lesson 1.7: Applying the Pythagorean Theorem

1. Find the length of the unmarked side in each right triangle.
Give your answers to one decimal place.



2. Jovi is laying a foundation for a garage with dimensions 10 m by 6 m. To check that the foundation is square, Jovi measures a diagonal. How long should the diagonal be?
Give your answer to one decimal place.
3. A guy wire is 14 m long. It is attached to a TV tower 12 m high. The guy wire is fastened to a stake in the ground. How far is the stake from the base of the TV tower?
Give your answer to one decimal place.
4. Petra is building a frame for her window. The frame is 88 cm wide and 105 cm tall. She measures the diagonal of her frame and finds that it is 137 cm. Is the frame a rectangle? Justify your answer.
5. A sloped mountain road is 13 km long. It covers a horizontal distance of 9 km. What is the change in elevation of the road?
Give your answer to one decimal place.
6. A cat is stranded in a tree. You lean a 10-m ladder against the tree. It is 2 m from the base of the tree. How far up the tree does the ladder reach?
Give your answer to one decimal place.