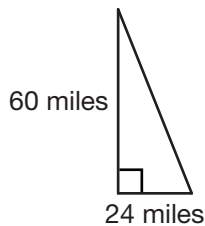


Assignment

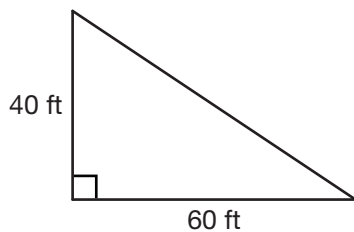
Name _____ Date _____

Installing a Satellite Dish The Pythagorean Theorem

1. A plane takes off from an airport and travels 24 miles due west and then 60 miles due north, landing on an island. How far is the airport from the island? Show all your work.



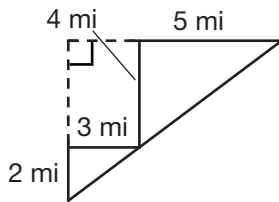
2. A helicopter is flying 40 feet above the ocean and spots a man-eating shark directly below. The distance from the shark to the beach is 60 feet. How far is the helicopter from the beach? Show all your work.



3. The perimeter of a rectangular area rug is 120 feet. Its width is 24 feet. What is the distance between two corners of the rug that do not share a common side? Show all your work.



4. A bird leaves its nest and flies two miles due north, then three miles due east, then four miles due north, and then five miles due east, finally reaching the ocean. How far is its nest from the ocean? Show all your work.



5. Two friends leave Pittsburgh at the same time in separate cars. One car travels due east, while the other car travels due north. Both cars travel at 55 miles per hour. Each car has a two-way radio with a talking range of 400 miles. In how many hours will they be too far apart to communicate on their radios? Show all your work.

6. A tree was planted 15.9 feet from a house and eventually grew to a height of 23 feet. During a particularly bad electrical storm, lightning struck the tree, causing the top of the tree to break off 6 feet above the ground. If the severed part of the tree is falling toward the house, will it hit the house? Use a complete sentence to explain your reasoning.

4

7. A plane is 5 miles directly above a house and 42 miles from an airport. How far is the house from the airport? Show all your work.

