

Geometry Review
Pythagorean Theorem and Trig Ratios 1

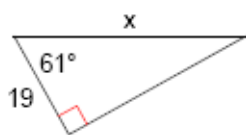
Name:
Period:

Draw a diagram, then solve each problem below.

1. Scott wants to swim across a river that is 400 meters wide. He begins swimming perpendicular to the shore he started from but ends up 100 meters down river from where he started because of the current. How far did he actually swim from his starting point?
2. In construction, floor space must be given for staircases. If the second floor is 3.6 meters above the first floor and a contractor is using the standard step pattern of 28 cm of tread for 18 cm of rise then how many steps are needed to get from the first to the second floor and how much linear distance will need to be used for the staircase?
3. How long would a railing be that was parallel to the steps in the previous question?
4. A careless construction worker drove a tractor into a telephone pole, cracking the pole. The top of the pole fell as if hinged at the crack. The tip of the pole hit the level ground 24 feet from its base. The stump of the pole stood seven feet above the ground. If an additional five feet of the pole extends into the ground to anchor it, how long should the replacement pole be? Draw a diagram.
5. In the Old West, settlers often fashioned tents out of a piece of cloth thrown over tent poles and then secured to the ground with stakes forming an isosceles triangle. How long would the cloth have to be so that the opening of the tent was 4 meters high and 3 meters wide?

Find the missing side. Round to the nearest tenth.

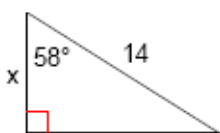
6)



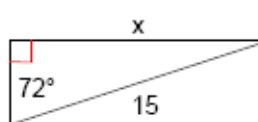
7)



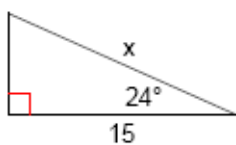
8)



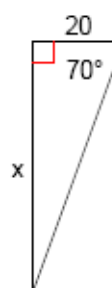
9)



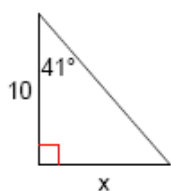
10)



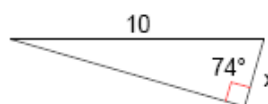
11)



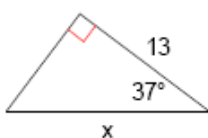
12)



13)



14)



15)

