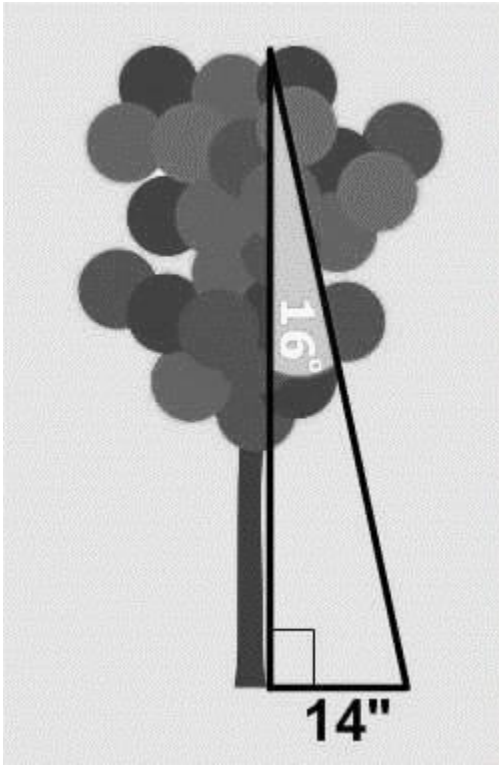**PRACTICE – THE TANGENT RATIO**   Name:_____
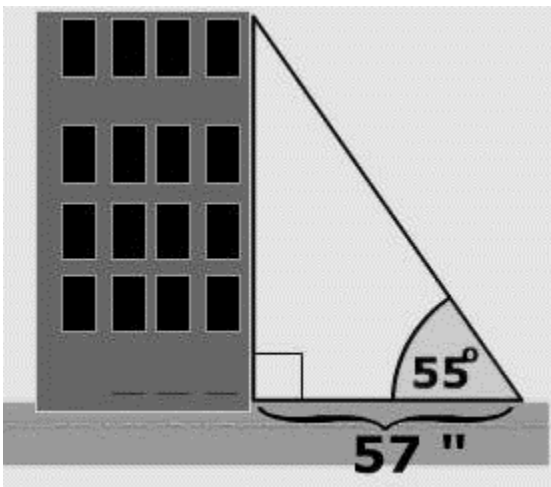
For each question, write and solve equations using the tangent ratio. If there is no picture, you must draw one. Show all of your work!
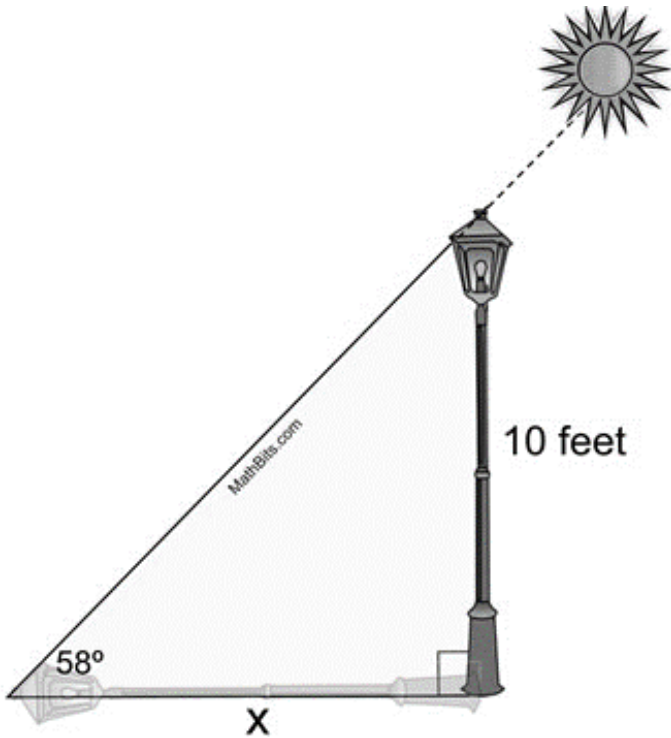
1.   What is the height of the tree below?

2.   At a point 57" from the base of a building, there is a 55° angle of elevation to the top of a building. What is the height of the building?

3.   Find the length of the shadow cast by a 10 foot lamp post when the angle of elevation of the sun is 58°. Find the shadow's length to the *nearest tenth of a foot.*

10 feet

58°

X

4.   The angle of elevation from a point 43 feet away from the base of a tree (on level ground) to the top of the tree is 34°. What is the height of the tree? Round your answer to the nearest tenth of a foot.

5.   If the angle of elevation to the top of a tree is 65°. How far are you away from the tree, if the tree's height is 27 feet? Round your answer to the nearest tenth of a foot.

6.   Joe's eye height is 5.5 feet. Standing 18 feet away from the base of a building, he looks up to the top of the building at a 71° angle. How tall is the building? Round your answer to the nearest tenth of a foot.