## Trigonometry Test Review

Solve each problem. You will need to use your own paper. Please remember to round side lengths to the nearest hundredth and angles to the nearest degree.

## 1. Find $x$ and $y$


2.


6.

7. A tree casts a shadow of 28 m . The elevation of the sun is $49^{\circ}$. How tall is the tree?
8. Shane is 61 feet high on a ride at an amusement park. The angle of depression to the park entrance is $42^{\circ}$, and the angle of depression to his friends standing below is $80^{\circ}$. How far from the entrance are his friends standing?

9. A 30 foot tree broke from its base and fell against a house. If the tree hit the house 18 feet above the ground, what angle is the tree forming with the house?
10. A freeway entrance ramp has an elevation of $15^{\circ}$. If the vertical lift is 22 feet, what is the distance along the ramp?
11. Lauren is at the top of a 15 m lookout tower. From an angle of depression of $25^{\circ}$, she sees Evan coming toward her. How far is Evan from the base of the tower?
12. Rosalinda has a rocket that can travel 1500 feet before exploding. On the $4^{\text {th }}$ of July, she lights the rocket at an elevation of $75^{\circ}$. How high will the rocket be when it explodes?
13. Mark has two sticks, 25 in . and 20 in . If he places them end to end perpendicularly, what two acute angles would be formed when he added the hypotenuse?

