Pre-AP Precalculus Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
**HW: Law of Sines and Cosines**

**For #1-10, use the Law of Sines or Cosines to solve the triangle.**

1. 2. a=15, b=19. C=43

3. 4.

5. 6.

7. A bridge is to be built across a small lake from a gazebo to a dock. The heading from the gazebo to the dock is . From a tree 100 meters from the gazebo, the headings to the gazebo and the dock are and , respectively. Find the distance from the gazebo to the dock.



8. A triangular field is 452 ft on one side, and 572 ft on another. The sides meet at an angle of

Find the length of the third side to the nearest foot.

9. The heading from the Pine Knob fire tower to the Colt Station fire tower is , and the two towers are 30 kilometers apart. A fire spotted by rangers in each tower has a heading of from Pine Knob and from Colt Station. Find the distance of the fire from each tower.



10. A ship travels for 3 hours at 150 mph at a bearing of 55 before it turns and sails due south for 2 hours at 200 mph. After 5 hours, how far is the ship from where it started?