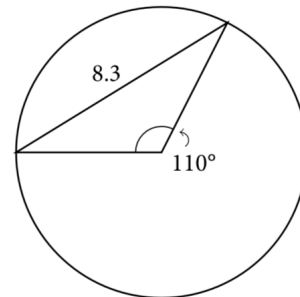Answer the questions in the spaces provided. **Show all of your work and circle the answer you would like to have graded for each question.**

Name: _____

1. Suppose two radar stations located 20 miles apart each detect an aircraft between them. The angle of elevation measured by the first station is 35 degrees, whereas the angle of elevation measured by the second station is 15 degrees. What is the altitude of the aircraft?

2. Find the diameter of the following circle:

3. Two planes leave the same airport at the same time. One flies 500 miles per hour at a bearing of N20°E while the other flies 600 miles per hour at a bearing of S30°E. How far apart are these two planes after 2 hours?

4. Suppose a boat leaves port, travels 10 miles, turns 20 degrees, and travels another 8 miles. How far from port is the boat?