

Cumulative Review – Laws of Sines and Cosines

Name _____

Precalculus

Period _____ Date: _____

Solve each problem by answering the question indicated. Round all answers to the nearest tenth.

1. Given $\triangle ABC$ with $a=9$, $b=8$, and $c=13$, find $\angle C$.

4. Solve $\triangle ABC$ if $\angle B=65^\circ$, $a=10$, and $b=8$.

2. Given $\triangle ABC$ with $\angle A=25^\circ$, $\angle B=75^\circ$, and $c=12$, find b .

5. Solve $\triangle ABC$ if $\angle C=40^\circ$, $a=7$, and $c=5$.

3. Given $\triangle ABC$ with $\angle A=62^\circ$, $\angle C=49^\circ$, and $a=14$, find c .

6. Find the area of $\triangle ABC$ if $\angle A=103^\circ$, $b=15$, and $c=17$.

7. An Atlanta park is made from an area between three intersecting streets (as shown). IF the lengths of the sides of the park are 675 feet, 525 feet, and 935 feet, what is the area that the park takes up?



8. A flagpole was incorrectly mounted in the ground 100 feet in front of a building without using cement. It now leans at an angle 5° from vertical *away* from the building. If a person standing at the front door looks at the top of the flagpole at an angle of elevation of 38° , how tall is the flagpole?

9. A sign is posted on the side of a hill that makes a 12° angle with the horizontal. The sun is shining at an angle of elevation of 62° making a shadow *down* the hill. If the sign is 8 feet tall, how long is its shadow?

10. A plane leaves an airport heading due south. After 100 miles, the captain turns to the right at an angle of 35 degrees. 200 miles later the plane reaches its destination. How far is the plane from its original location?