**Homework 10**

**Part 1: The Law of Sines**

*Use the Law of Sines to solve for the indicated variable. Round to the nearest tenth.*

1. Given A=55∘,B=45∘,a=12, find side b.
2. Given C=102∘,B=28∘,c=20, find side b.
3. Given A=40∘,a=15,b=18. Find all possible measures of angle B. (Ambiguous Case: When using Law of Sines on a triangle where we have the SSA measurements, check if we can make more than one triangle with the information given.)

**Part 2: The Law of Cosines** *Use the Law of Cosines to solve for the indicated variable. Round to the nearest tenth.*

4. Given a=8,b=10,C=60∘, find side c.

6. Given a=13,b=15,c=17, find the measure of angle A.

**Part 3: Which Law to Use?**

*For each problem, state whether you would use the Law of Sines or the Law of Cosines to begin solving the triangle. Then, solve the triangle completely.*

7. Given A=70∘,B=80∘,c=10.

8. Given a=6,b=7,c=8.

**Part 4: Review**

10. Find all solutions in the interval [0,2π) for the equation 2cos^2(x)+cos(x)−1=0.

11. Write an algebraic expression for tan(arcsin(x)). (Hint: Represent the problem with a right triangle)