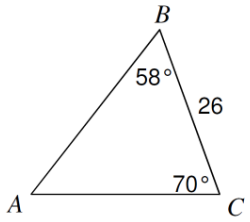
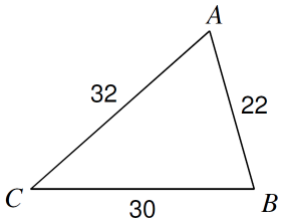
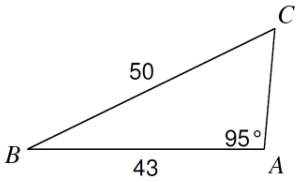
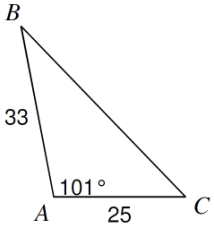
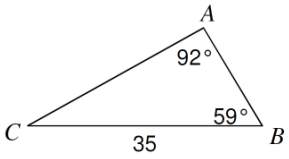
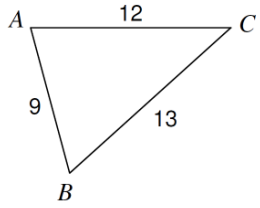
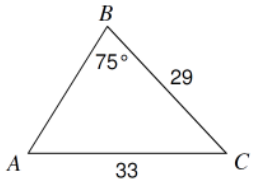
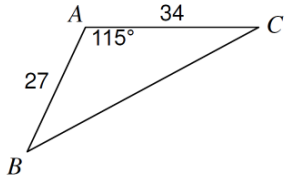
Advanced Functions – Review for Unit # 7 Test WS Name: _____

I. Find the asked side or angle for each triangle. Round to tenth place. Show work!

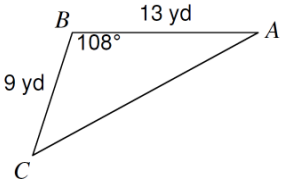
1.) Find: side b	2.) Find: largest angle	3.) Find: angle C	4.) Find: side a
			
Answer: _____	Answer: _____	Answer: _____	Answer: _____

II. State and find what is asked for each triangle. Round to tenth place. Use appropriate letters! Show all of your work for <u>each part</u> no matter how simple it is!

Given Triangle	Type of Triangle Method	Required Work	Answers
5.) 			
6.) 			
7.) 			
8.) 			

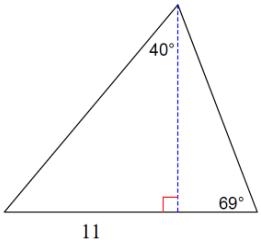
III. Using appropriate formula, find the area of each triangle. Round to tenth place. Show work!

9.)



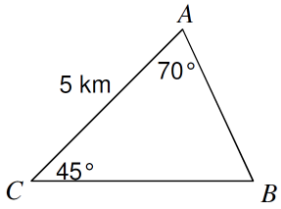
Area of Δ = _____

10.)



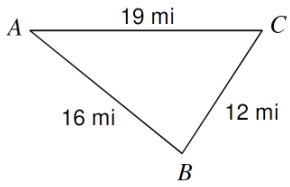
Area of Δ = _____

11.)



Area of Δ = _____

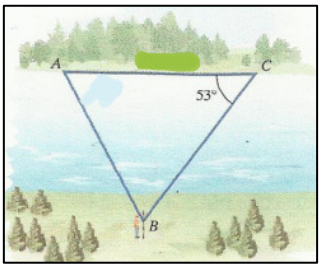
12.)



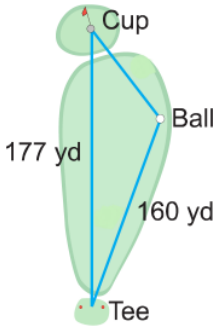
Area of Δ = _____

IV. Simple Word Problems – Complete each problem that requires one to two steps for the answer.

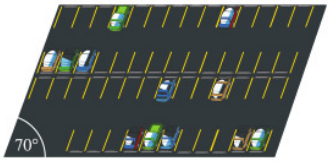
13.) A surveyor is standing opposite of two points (A and C) on the bank of a river. The distance between the two points is 900 feet. The width of the river opposite of point C is 793 feet. What is the angle formed at the surveyor?



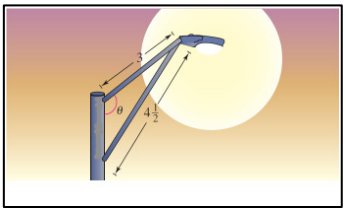
14.) A golfer hits a golf ball at a 4° from the ball's straight path to the cup. How far does the ball lie from the cup?



15.) An office building has a parallelogram shaped parking lot with side lengths of 76 meters and 105 meters. What is the area of the parking lot?

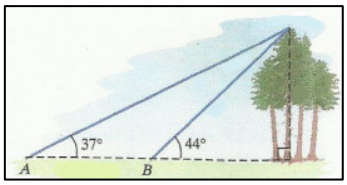


16.) Below is a design for a street light. The distance between the two arms that connect to the light is 2 feet. What is measure of angle θ?

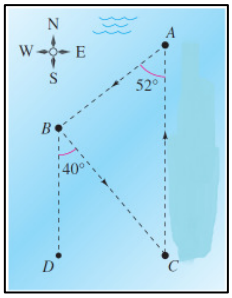


V. Complex Word Problems – Complete each problem that requires multiple steps for the answer.

17.) The distance between two points on the ground is 100 ft. What is the height of the tree?



18.) The diagram of a sailboat race is given below using triangle ABC. The length of side b is 8 km. What is the total distance of the race?



19.) Adam is designing a triangular pen in his backyard with lengths: (2b + 1) ft , (b + 10) ft , and (3b – 4) ft. Adam has 43 ft of fencing for the pen. What is the smallest angle formed by the pen?

20.) A dart is thrown at the board below. What is the probability that the dart will land in the shaded region?