

Problem of the Week Week 8, Due October 28th 11:59pm NAME: _____

NAU Email: _____

Please write clean, neat and complete solutions to the problem in order to receive full credit. Your job is to convince me, or really anybody who reads this document, that you understand the problem and are able to communicate what you are thinking. Please submit your solutions through Gradescope (<https://www.gradescope.com>) by the indicated deadline. You might need to create an account with your NAU email. To enroll in the Problem of the Week course use entry code: NYZ56P. Good luck and have fun!

PROBLEM. *Area in a Triangle*

You are given an equilateral triangle with side length a . A straight line connects the center of the bottom side of the triangle to the border of the triangle with an angle of α . Derive an expression for the enclosed area $A(\alpha)$ with respect to the angle.

