PROBLEM OF THE MONTH #2

FEBRUARY 2020

Directions: Write a complete solution to the problem below showing all work. Your paper must have your name, W#, and Southeastern email address. Solutions are to be placed in the envelope for Problem #2 located in the Department of Mathematics Office, Fayard 308 by 12:00 noon, **Thursday, February 27**. No late papers will be accepted.

All papers with a correct solution will be entered in a drawing for a great prize!

Questions concerning the problem of the month should be sent to either Dr. Tilak de Alwis (tdealwis@selu.edu), or Dr. Dennis Merino (dmerino@selu.edu)

PROBLEM: *Solving Triangles*

Suppose ABC is a triangle such that

$$Sin2A\ Cos3B = Cos2A\ Sin3B\ SinC\ - 1 \text{ with } A < 45°$$

Given that $c = 4$ units, find the exact value of b.