

PROBLEM OF THE MONTH #1

FEBRUARY 2017

Open to all students whose mathematics classes come solely from the following list: Math 92, Math 105, Math 151, Math 161, Math 162, Math 163, Math 165, Math 177, Math 287, Math 185, Math 241, or Math 277 or their equivalent.

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 #1 located in the Department of Mathematics Office, Fayard 308 by 4:30 p.m., **Thursday, March 16**. 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. Randy Wills (rwills@selu.edu)

PROBLEM: The Sixty-Three Dollar Question

You have 63 one-dollar bills and six envelopes. You want to place the bills in the envelopes in such a way that any amount from \$1 to \$63 could be obtained exactly by selecting a combination of envelopes. How many dollars would you place in the envelope with the greatest number of bills? Explain how you came up with this number and why it is the greatest number of bills possible.

Show your work.