PROBLEM OF THE MONTH #1

OCTOBER 2014

Open to all students whose mathematics classes come solely from the following list: Math 92, Math 155, 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, November 6**. 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 : *Be a Daredevil!*

Paul Walker is a crackerjack pilot known for his fearless aerial stunts. For one particular stunt, he put the plane into a dive and when he reached a certain height, he pulled up just in time to avoid crashing into the ground. A mathematical model for his height $h(t)$ above the ground (in hundreds of feet) after t-seconds is given by

$$h(t) = \frac{t^2 + 25}{t}, t > 1$$

Without using calculus, determine the following:

(a) The time t when he pulls up

(b) The height above the ground when he pulls up.

Paul Walker's aerial stunt show is coming to Hammond!!!!

Be there or be a complete square.