SELF-ASSESSMENT OF THERMODYNAMIC PROBLEM SOLVING (at EXAM #1)

S – denotes a perceived strength w/description of benefit
I – denotes a perceived area for improvement w/description of how to implement

PROBLEM DEFINITION
S: describing the situation under study with compelling sketches/diagrams
   => captures key details and ignites creative thinking
S: listing knowns (values & units), unknowns (units), and assumptions
   => clarifies what you have to work with and what must be found
S: citing tables and formulae used
   => can be cross-referenced against lecture notes for accuracy and applicability
I: doing a more comprehensive job on my system description
   => defining important boundaries, flows, and variables
I: identifying unforeseen difficulties earlier
   => begin working on homework when it is assigned, making strategic use of office hours

SOLUTION
S: regularly conducting unit analysis as part of my solution validation
   => insures that correct units are used and conversion factors are applied
S: laying out my solution method
   => displaying governing equations w/variables before plugging numbers/units
S: using a standard approach that is familiar to others (including the grader)
   => adoption of ME 322 given, find, solution, and reflection methodology
I: being more disciplined in reporting significant figures on the final result
   => only keeping decimals when they matter adds credibility to engineering results
I: sharing more background detail regarding my EES solutions
   => review and apply ME322 guidelines posted on course website for EES solutions

PROFESSIONALISM
S: thoughtfully laying out my solution path and using white space more strategically
   => facilitates review/reuse by self and others
S: boxing solution and its units
   => makes it easy to check overall result
S: generating reflections that can add value to future problem solving
   => focusing on sources of added value for possible reuse at some point in the future
I: finding interesting things to say in my reflections
   => try to make a better connection with day to day personal experiences
   => purposefully take notes on possible reflections while actually doing the problem
   => analyze my answer/method by writing 2-3 sentences rather than giving a generalization
I: communicating a more positive first impression
   => rewrite messy solutions to more logically present the solution process/results
   => practice better handwriting by using engineering paper