Do a complete thermodynamic analysis of the following Otto cycle engine, using two different approaches. First, assume g = 1.35 constant. Second, allow g to vary. Use EES for both. A demonstration of some of the calculations will be done in class. Here is the data.

- 2.2 liter 4 cylinder SI engine.
- Operating WOT at 3200 RPM
- AF ratio is 15
- Fuel has heating value of 44000 kJ/kg, combustion is assumed complete
- Residual mass fraction is 0.06.
- Compression Ratio = 9.2
- Mechanical Efficiency is 0.84

Complete the Following Table

	G constant	G variable
P1		
T1		
P2		
T2		
P3		
T3		
P4		
T4		
Net Work / Cycle / Cyl		
Fuel Conversion Efficiency		
Bmep		
Brake Power		

Attach your work. Include listings of EES files, with comments, and explanations.

Due October 21, 2003.