Problem discussed in the videos:

Videos (7) – (11)
A diatomic gas first goes through the process in the PV diagram [drawn on blackboard] from *a* to *b*, which is a straight line in the diagram. It is then cooled at constant volume to point *c*. Finally, it is adiabatically compressed back to point *a*. The pressure and volume at point *a* are 1.0 atm and 2.0 m^3, and the pressure and volume at point *b* are 1.5 atm and 4.0 m^3. (a) Find the pressure at point *c*. (b) Find the work done by the gas and heat absorbed in the process from *a* to *b*.