1. For the points A-E on the 308K isentropic map below, indicate whether the air sinks, rises, or stays at about the same height. Assume that the storm is stationary (frozen wave approximation) (25%) (note: the contours are pressure, mb)

2. At which of the 5 points in the map above is the baroclinicity the greatest? Explain (5%)

3. Draw schematic low-level and upper-level height contours and fronts for (a) a young extratropical cyclone, and (b) an occluded cyclone. Also show areas of low level warm and cold air, and areas of mid-level rising and sinking (40%)

4. Draw a vertical cross section across a cold front. Show isotherms, the frontal surface, winds (horizontal and vertical), and clouds. Also draw a surface pressure trace below your cross section. (30%)