Problem 3

Find a jump in a thermal expansion coefficient  $\alpha$  and a compressibility  $\beta$  at the second order phase transition point. Definitions:

$$\alpha = \frac{1}{V} \left( \frac{\partial V}{\partial T} \right)_P$$
$$\beta = -\frac{1}{V} \left( \frac{\partial V}{\partial P} \right)_T$$