QUIZ #2, Math 253

1. (a) Find the point of intersection the two lines $L_1 : \ x = 1 + 2t, \ y = 1 - t, \ z = 1 + 2t$
   and $L_2 : \ \ x = 2 + s, \ y = 2 + s, \ z = 3 + 2s$

   (b) Find an equation of the plane containing both lines.

2. Let V be the region in 3-space consisting of all points (x, y, z) satisfying the inequalities $\sqrt{x^2 + y^2} \leq z \leq \sqrt{1 - x^2 - y^2}$. Sketch the region V and describe it in spherical coordinates.