Math 323

Quiz 7   **Name:**_____

Instructions: This is a take home quiz. You may attach additional sheets of paper if there is not enough space on this handout. You may discuss the quiz with tutors or classmates, but the final write-up must be your own work. The quiz is due on Monday, April 27th at 4:00pm.

1. Let Q be the portion of $x^2 + y^2 + z^2 = 16$ in the first octant.

   (a) (7 points) Find the mass of the solid Q is its density is given by $\delta(x, y, z) = 8z$

   (b) (13 points) Find the centroid of Q as a solid (for this part, assume that it has constant density)