Math 201-172 Quiz 3 (A)

Name:.....ID#:.....Sec:.....Ser:.....

Q.1: Find an equation of the set of all points equidistant from the points $A(2, 5, 3)$ and $B(6, 2, -2)$. Describe the set.

Q.2: Let C be the point on the line segment AB that is twice as far from B as it is from A. If $\vec{a} = \overrightarrow{OA}$, $\vec{b} = \overrightarrow{OB}$, and $\vec{c} = \overrightarrow{OC}$, show that $\vec{c} = \frac{2}{3}\vec{a} + \frac{1}{3}\vec{b}$.

Q.3: $\vec{a} =< 3, 2, 3 >$ and $\vec{b} =< 2, 1, 4 >$. Find scalar and vector projection of $\vec{a}$ onto $\vec{b}$.