Quiz 13 on Calculus II
Summer 2009

Name: ____________________________

1. Find the scalar and vector projections of $\langle 1, 2, 3 \rangle$ onto $\langle 3, 6, -2 \rangle$.

2. Find the unit vector in the direction $8 \vec{i} - \vec{j} + 4 \vec{k}$.
3. Find an equation of the sphere that passes through the point $(4,3,-1)$ and has center $(3,8,1)$.

4. Compute $|\overrightarrow{a} - \overrightarrow{b}|$, where $\overrightarrow{a} = \langle 1, 2, -3 \rangle$ and $\overrightarrow{b} = \langle -2, -1, 5 \rangle$. 