Quiz 10

Show your reasoning clearly for full credit.

1. (5 pts) Determine the direction angle $\theta$ of the vector $\vec{v} = -8 \vec{i} + 6 \vec{j}$. Round your answer to the nearest degree.

2. (5 pts) Calculate and sketch the unit vector $\vec{u}$ with direction angle $\theta = \frac{7\pi}{6}$. Write it in the form $a\vec{i} + b\vec{j}$, where $a, b$ are exact values.

3. (5 pts) Are the vectors $<-1, 3>$ and $<6, 2>$ perpendicular? Justify your answer.

4. (5 pts) Find the angle between the vectors $<3, 5>$ and $<5, 5>$. Round your answer to the nearest degree.