Handout for Lesson Plan 14

Which of the following are unit vectors?

1) $\vec{v} = \left\langle \frac{2}{3}, \frac{1}{3} \right\rangle$	2) $\vec{v} = \left\langle \frac{3}{4}, \frac{-\sqrt{7}}{4} \right\rangle$	3) $\vec{v} = \left\langle -\frac{5}{13}, \frac{12}{13} \right\rangle$

Find a unit vector in the same direction as:

4) $\langle 3,3 \rangle$	5) $\langle -3,5 \rangle$	6) $\vec{i} + \vec{j}$

Find the projection of $\vec{v} \to \vec{u}$

7) $\vec{v} = \langle 9,2 \rangle \quad \vec{u} = \langle 1,0 \rangle$	8) $\vec{v} = \langle 5,3 \rangle \quad \vec{u} = \langle -2,7 \rangle$

Find the angle between the two vectors

9) $\vec{v} = \langle 5,3 \rangle \quad \vec{u} = \langle -2,7 \rangle$	10) $\vec{v} = \langle \sqrt{3},2 \rangle \quad \vec{u} = \langle 4,-1 \rangle$