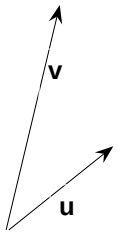
Math 107, Sect. 350 **Answers to Quiz # 9** **5 Apr '07**

. 5 1. Express the vector $\vec{v} = \overrightarrow{AB}$ where $A = (3, 2, 1)$ and $B = (-1, 7, 4)$ in the form of $\vec{v} = v_1\vec{i} + v_2\vec{j} + v_3\vec{k}$.

Solution. We have

$$\vec{v} = \langle -1 - 3, 7 - 2, 4 - 1\rangle = \langle -4, 5, 3\rangle = -4\vec{i} + 5\vec{j} + 3\vec{k}.$$

. 5 2. a. Given below are the vectors $\vec{u}$ and $\vec{v}$. Clearly graph $\vec{u} + \vec{v}$.



b. If $\vec{u} = \langle 2, 1\rangle$ and $\vec{v} = \langle -4, 3\rangle$, what is $\vec{u} + \vec{v}$?

Solution. We have (b)

$$\vec{u} + \vec{v} = \langle 2 - 4, 1 + 3\rangle = \langle -2, 4\rangle .$$

And for part (a):