

**Quiz 1****Calculus 3****8/29/03**

Each problem is worth 5 points. For full credit indicate clearly how you reached your answer.

1. For the vector  $\mathbf{v} = 3\mathbf{i} - 2\mathbf{j} + \mathbf{k}$ , find a unit vector in the direction of  $\mathbf{v}$ .

2. Determine whether the vectors  $\mathbf{a} = \langle -2, 3, 1 \rangle$  and  $\mathbf{b} = \langle 5, 3, 2 \rangle$  are perpendicular or not. Make it clear how you can tell.