

# Quiz 1

MATH 241 Quiz 1

Answer the questions in the spaces provided. If you run out of room for an answer, continue on the back of the page.

Name: \_\_\_\_\_

1. Find a unit vector  $\hat{\mathbf{a}}$  having the same direction as the vector  $\mathbf{a} = 2\mathbf{i} - \mathbf{j} + 3\mathbf{k}$ .

2. Show that the vectors

$$\mathbf{i} + \mathbf{k}, \mathbf{i} + 2\mathbf{j} - \mathbf{k}, -\mathbf{i} + \mathbf{j} + \mathbf{k}$$

are mutually perpendicular.