

Quiz 1

MAC 2313-03

Spring 2010

Full Name: _____

Score: _____

Show all of your work for full credit.

1. Are these expressions meaningful? Do they result in vectors or scalars?

(a) $(\mathbf{a} \cdot \mathbf{b}) + \mathbf{c}$

(b) $(\mathbf{a} \cdot \mathbf{b})\mathbf{c}$

2. For what values of b are the vectors $\mathbf{u} = -6\mathbf{i} + b\mathbf{j} + 2\mathbf{k}$ and $\mathbf{v} = \mathbf{i} + b^2\mathbf{j} + b\mathbf{k}$ orthogonal?

3. Find the equation of the line through the origin and $(1, 2, 3)$