

UNIVERSITY OF ALABAMA  
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PH 125 / LeClair

January 15, 2009

## Quiz 2: Vector Madness

**Instructions:**

1. Answer both questions below. Both have equal weight.
2. Express your answer with the appropriate units and significant digits
3. Show your work for full credit.

You have two vectors:

$$\vec{a} = 1\hat{i} + 2\hat{j} + 3\hat{k}$$

$$\vec{b} = 3\hat{i} + 6\hat{j} + 9\hat{k}$$

1. Find the scalar product of the two vectors,  $\vec{a} \cdot \vec{b}$

2. Find the vector product of the two vectors,  $\vec{a} \times \vec{b}$