

B15.

MATH 1300: Quiz #3

Name _____

Student Number _____

1. Suppose $\mathbf{u} = (1, 2, 3)$ and $\mathbf{v} = (-2, 1, 0)$
- (a) Compute $2\mathbf{u} - \mathbf{v}$.
- (b) Find the components of a vector \mathbf{w} such that $2\mathbf{w} - \mathbf{v} = \mathbf{u}$.
- (c) Find the unit vector in the direction of \mathbf{v} .
- (d) Find any (non-zero) vector \mathbf{z} that is perpendicular to the vector \mathbf{u} .
- (e) Find the cosine of the angle between the vector \mathbf{u} and the vector $\mathbf{e} = (1, 0, 0)$. Do not simplify your answer.