Take home Quiz 0 - Practice/Bonus
Due: Monday Jan 11, 2016
Answer the questions in the spaces provided.

*Please hand in your quiz at the beginning of lecture on the due date*

Name and Student Number: _______________________________________________________

1. Let \( u = \langle -2, -3, 0 \rangle \) and \( v = \langle 1, 2, 1 \rangle \). Evaluate the following expressions:

   (a) \( 3u + 2v \)

   (b) \( 4u - v \)

   (c) \( |u + 3v| \)

2. Determine whether the following pairs of planes are parallel, orthogonal or neither. Please justify your answer!

   (a) \( x + y + 4z = 10 \) and \( -x - 3y + z = 10 \).

   (b) \( 2x + 2y - 3z = 10 \) and \( -10x - 10y + 15z = 10 \).
(c) \[3x + 2y - 3z = 10 \quad \text{and} \quad -6x - 10y + z = 10.\]

3. Find an equation of the plane passing through the point \((1, 2, 0)\) and is parallel to the plane \(x - 5y - 2z = 1.\)