

# Math 4133 - Linear Algebra

Quiz #8 - 2014.02.21

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

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Consider the following vectors:

$$\vec{t} = \langle 1, 0, -1 \rangle, \quad \vec{u} = \langle 1, 2, -1 \rangle, \quad \vec{v} = \langle 1, 0, 1 \rangle, \quad \vec{w} = \langle -2, -4, 2 \rangle,$$

1. Which of the vectors has the largest magnitude?
2. Two of the vectors lie along the same line, which are they?
3. Two of the vectors have the same magnitude, which are they?
4. Find a unit vector in the direction of  $\vec{t}$
5. The vector  $\vec{v}$  is perpendicular to which of the other vectors?