

Name _____

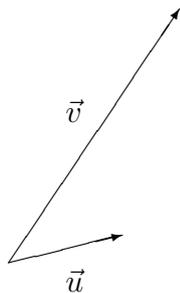
Section A, C, D 10

MA 104, Quiz #5

11 March 2008

Instructions: You have 15 minutes to complete this quiz. The quiz is worth 15 points. You are allowed to use basic issued calculator for this quiz. Show all work for full credit. Good luck!

- A cat is sitting on the ground at the point $(1, 4, 0)$ watching a squirrel at the top of a tree. The tree is one unit high and its base is at the point $(2, 4, 0)$. Find the displacement vectors
 - from the origin to the cat.
 - From the bottom of the tree to the squirrel.
 - From the cat to the squirrel.
- Find the vector that points in the same direction as $\langle 1, -1, 2 \rangle$, but has length 2.
- Write $(\vec{i} + 2\vec{j}) + (-3)(2\vec{i} - \vec{k})$ in vector notation; i.e., $\langle x, y, z \rangle$.
- Using the following picture draw, $2\vec{u} - \vec{v}$



- Find a value for c for which $\vec{a} = \langle 3, -2, 5 \rangle$ and $\vec{b} = \langle 2, 4, c \rangle$ will be perpendicular.