

MTHU 242

April 13, 2007

Quiz #12

Professor Gilmore

20 Minutes

Name: _____.

Show All of Your Work

- (1) Find the dot product of the two vectors $\vec{V} = (2, 5, -3)$ and $\vec{W} = (-2, 3, -5)$.
- (2) A man with a mass of 80 kgs. slides down an icy, frictionless driveway and keeps his balance. The length of his slide is 20 meters and the angle of incline of the driveway from the horizontal is 30° . How much work is done by gravity?
- (3) (a) Find the vector equation for the line in 3-space which goes through the point $P = (2, -3, 5)$ and is parallel to the vector $\vec{V} = (4, -5, -2)$.
- (b) Find the symmetric form of the equations for that line.