Quiz 5   Calculus 3   11/5/2007

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Evaluate $\int_C \mathbf{F} \cdot d\mathbf{r}$ for $\mathbf{F}(x,y,z) = \langle -y, x \rangle$ and C a circle of radius 2 centered at the origin and traversed counterclockwise.

2. Evaluate $\int_C \mathbf{F} \cdot d\mathbf{r}$ for $\mathbf{F}(x,y,z) = yz\,\mathbf{i} + xz\,\mathbf{j} + (xy + 2z)\,\mathbf{k}$ and C a line segment from $(1,0,-2)$ to $(4,6,3)$.