Quiz 4   Calc 3   11/26/2002

1. Compute $\int_C \mathbf{F} \cdot d\mathbf{r}$ for the vector field $\mathbf{F}(x,y) = y^3\,\mathbf{i} + 3xy^2\,\mathbf{j}$ where C is the top half of a circle centered at the origin beginning at (2,0) and ending at (-2,0).

2. Let $\mathbf{F}(x,y) = -y\mathbf{i} + x\mathbf{j}$. Compute $\int_C \mathbf{F} \cdot d\mathbf{r}$ for C the line segment beginning at (1,0) and ending at (2,3).