**(Easier) Practice Quiz 7 Calc 3 11/9/2004**

1. Compute $\int_C (6xy\vec{i} + 3x^2\vec{j}) \cdot d\vec{r}$ for a path beginning at (3, 0) and ending at (0, -3).

2. Compute $\int_C \langle y^2, xy \rangle \cdot d\vec{r}$ for a path $C$ given by $\vec{r}(t) = \langle 2+3t, 1-5t \rangle$ for $0 \le t \le 1$.

**(Harder) Practice Quiz 7 Calc 3 11/9/2004**

1. Compute $\int_C \vec{F} \cdot d\vec{r}$ for the vector field $\vec{F}(x,y) = \langle 2xy, x^2 - 6y \rangle$ and with *C* the sinusoidal path beginning at (3, 0) and ending at (-3, 0) and performing 17 complete oscillations on this interval.

2. Compute $\int_C \vec{F} \cdot d\vec{r}$ for the vector field $\vec{F}(x,y) = x^2 y\,\vec{i} + y^3\,\vec{j}$ and with *C* an arc of a circle (centered at the origin) of radius 3 passing counterclockwise through the first and second quadrants.