Math 225: Calculus III Name:_____
Quiz 9 *November 20, 2003* Section:_____

1. Use the Fundamental Theorem of Line Integrals to compute $\int_{\mathcal{C}} \mathbf{F} \cdot d\mathbf{r}$ where $\mathbf{F} = \langle e^x \sin(y) + 2z, e^x \cos(y), 2x \rangle$ and $\mathcal{C}$ is the curve parameterized by $\mathbf{r}(t) = \langle 1 + \tan(t), t, 1 \rangle$, $0 \leq t \leq \pi/4$.

2. Use Green's Theorem to compute $\int_C \frac{y}{x+2}\, dx + (x + \ln(x+2))\, dy$ where $\mathcal{C}$ is the positively oriented circle $x^2 + y^2 = 1$.