Name: December 1, 2016 MAC 2313.9728 Cyr

> Quiz 13 You must show all work to receive full credit!!

Problem 1. (5 points) Evaluate $\int_{\mathcal{C}} \mathbf{F} d\mathbf{r}$, where $\mathbf{F} = \langle yze^{xz}, e^{xz}, xye^{xz} \rangle$ and \mathcal{C} is parameterized by $\mathbf{r}(t) = \langle t^2 + 1, t^2 - 1, t^2 - 2t \rangle$ for $0 \le t \le 2$.

Problem 2. (5 points) Evaluate $\int_{\mathcal{C}} (x^2 + y^2) dx + (x^2 - y^2) dy$, where \mathcal{C} is the triangle with vertices (0, 0), (2, 1), and (0, 1), oriented counterclockwise.