Name:
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MAC 2313.8443
Cyr

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

Problem 1. (5 pts) Set up (but do NOT evaluate) $\iint_{\mathcal{S}} xe^z \, dS$, where $\mathcal{S}$ is the portion of the cylinder $x^2 + y^2 = 4$ with $0 \leq z \leq 4$.

Problem 2. (5 pts) Evaluate $\oint_{\mathcal{C}} \mathbf{F} d\mathbf{r}$, where $\mathbf{F} = \langle y^2, x^2 \rangle$ and $\mathcal{C}$ is the boundary of the rectangular region $0 \leq x \leq 7, 0 \leq y \leq 1$, oriented counterclockwise. (Hint: use Green's Theorem.)