Name:
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MAC 2313.8443
Cyr

Quiz 12
You must show all work to receive full credit!!

Problem 1. (4 pts) Compute $\int_{\mathcal{C}} \mathbf{F} d\mathbf{r}$ where $\mathbf{F} = \langle x, 2 \rangle$ and $\mathcal{C}$ is the quarter circle $x^2+y^2 = 4$ with $x \leq 0, y \geq 0$, oriented counterclockwise.

Problem 2. (6 pts) Evaluate $\int_{\mathcal{C}} \mathbf{F} d\mathbf{r}$, where $\mathbf{F} = \langle 2xy + 5, x^2 - 4z, -4y \rangle$ and $\mathcal{C}$ is a path from $(-2, 1, -1)$ to $(1, 2, 1)$, without parameterizing $\mathcal{C}$.