Name:

1. Use Stokes' theorem to evaluate $\int_C \mathbf{F} \cdot d\mathbf{r}$, where $\mathbf{F}(x, y, z) = \langle xy, 2x, 3y \rangle$, and C is the curve of intersection of the plane $x + z = 5$ and the cylinder $x^2 + y^2 = 9$.