Name:_____

Section:_____

Quiz 11

1. **(10 points)** Let $\mathbf{F} = \langle y^2, 2z + x, 2y^2 \rangle$. Use Stoke's theorem to find a plane with equation $ax + by + cz = 0$ (where a, b and c are not all zero) such that $\oint_{\mathcal{C}} \mathbf{F} \cdot d\mathbf{r} = 0$ for every closed path $\mathcal{C}$ lying in the plane. (Hint: Choose a, b, c so that curl($\mathbf{F}$) lies in the plane).