Math 3298 Worksheet 13: Stokes' Theorem
$$\int\int_S (\nabla \times \vec{F}) \cdot \vec{n} \, dS = \oint_{\partial S} \vec{F} \cdot d\vec{r}$$

Group members (1 to 4): _____

(1) Compute the flux of the curl of the vector field

$$\vec{F} = (xyz - xy - yz, \ -x^2 z + y^2 z + x^2 + xz, \ z)$$

through the surface $z = x^2 + y^2$, $z \in [0, 1]$, with upward pointing normal. Note: Stokes' theorem can spare you a lot of pain.