Math 3298 Worksheet 34: Surface flux (vector) integrals

Group members (2 to 4): _____

(1) Compute the flux of the vector field $\vec{F} = (x, y, z^4)$ through the cone $z = \sqrt{x^2 + y^2}$, $z \in [0, 1]$. Choose the normal to the cone to have positive z component (i.e. upward-pointing).