

Math 3298 Worksheet 20: Surface flux (vector) integrals

Group members (1 to 3): \_\_\_\_\_

- (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).