

Math 3298 Worksheet 38: another surface flux integral

Group members (2 to 4): \_\_\_\_\_

- (1) Compute the surface flux integral  $\int \int_S \vec{F} \cdot \vec{n} \, dS$  where  $S$  is the surface of the cylindrical plug formed by the cylinder  $x^2 + y^2 = 4$  and the planes  $z = 0$  and  $z = 2$ , with outward pointing normal, and  $\vec{F} = (x, y, 5)$ .