

Math 3298 Worksheet 36

Group members (2 to 4): _____

- (1) Use Stoke's theorem to compute the flux of the vector field
 $G = (-xy + z, \cos(x), yz)$ out of the unit sphere $x^2 + y^2 + z^2 = 1$.

- (2) Find the maximum value of the integral $\oint (y^3 - y)dx - 2x^3dy$ over all simple closed curves. (Use Green's theorem.)