

Math 3298 Worksheet 45: Lagrange multiplier and extremization review

Group members (2 to 4): _____

- (1) Find the points on the surface S closest and farthest away from the point $(-1, 1, 1)$, where S is the portion of the graph $z = xy$ with $x^2 + y^2 \leq 1$.
(Check both the interior and the boundary!)