

Math 1AA3/1ZB3: Week 13 Tutorial Problems

April 5, 2019

1. Find the directional derivative to $z = xy^2 \sin(xy)$ at $(x, y) = (1, -2)$ along the direction $(1, 1)$.
2. Let $z = x^2 e^y$. Find the magnitude and direction of the largest rate of increase of z .
3. Find the volume under $z = xy^2 + 1$ on the diamond with vertices at $(1, 0)$, $(-1, 0)$, $(0, 1)$, $(0, -1)$.