

Math 1AA3/1ZB3: Week 11 Tutorial Problems

March 22, 2019

1. Sketch level curves for the function $f(x, y) = e^{xy}$.
2. Compute the derivatives f_{xy} and f_{yx} for $f(x, y) = x^2 \cdot \cos(xy)$.
3. For the following functions, determine $\lim_{(x,y) \rightarrow 0} f(x, y)$:

(a)

$$f(x, y) = \frac{x^2 y^6}{x^6 + y^6}$$

(b)

$$f(x, y) = \frac{x^2 y^4}{x^4 + y^6}$$