

# Math 2415

## Homework on 14.7 (Global)

1. Find the absolute maximum and minimum values of  $f(x, y) = x^2 + y^2 + x^2y$  on the square domain where  $-2 \leq x \leq 2$  and  $-2 \leq y \leq 2$ .
2. Stewart 14.7.32
3. Find the absolute maximum and minimum values of  $f(x, y) = e^{-x^2-y^2}(x^2 + 2y^2)$  on the domain  $x^2 + y^2 \leq 4$ .
4. Find the absolute maximum and minimum values of the function  $f(x, y) = x^2y$  on the domain  $D = \{(x, y) | x \geq 0, y \leq 0, x^2 + y^2 \leq 4\}$