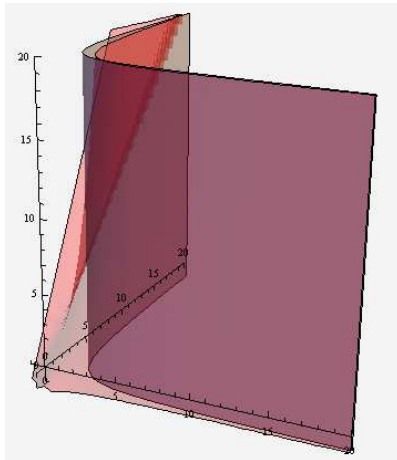


YOUR NAME: _____

George Voutsadakis

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

- Find the critical points for the optimization problem of maximizing/minimizing the function $f(x, y) = x^2y + x + y$ subject to the condition $xy = 4$ (using the method of Lagrange Multipliers).



- Calculate $\iint_R \frac{dA}{(x+y)^2}$, where $R = [1, 2] \times [0, 1]$.

