MAC 2313-01   Spring 2010

Full Name: _____   Score: _____

Show all of your work for full credit.

1. Use the method of Lagrange multipliers to set-up (but do not solve) the problem of finding the extreme values of the function $f(x, y) = e^{(xy)}$ subject to the constraint $xy = -1$.

2. Calculate

$$\iint_D \frac{x}{y} + \frac{y}{x} \, dA,$$

where $D = [1, 2] \times [1, 4]$