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!!

1. Use Lagrange multipliers to find the minimum and the maximum value of

$$f(x, y) = 5x^2 + 30y$$

subject to the condition $x^2 - 5y^2 = 10$.