
2. Use the method of Lagrange multipliers to find

   (a) the maximum of the function $F(x, y) = x^3y^3$ on the ellipse $(x/a)^2 + (y/b)^2 = 1$.
   (b) the maximum of the function $F(x, y, z) = x + y^2 + z^3$ on a sphere with radius $r = 1$.

3. Problem 5.34, page 246 in Griffith - Electrons in two-dimensional infinite square well. Also, calculate the total energy of the system.


Due Friday, February 9, in class. Scores for late problem sets will be divided by 2.