1. Let $f(x, y) = x^6 + y^3 + 6x - 12y + 7$.
   (a) (15 points) Find all points (a, b) such that $f_x(a, b) = 0 = f_y(a, b)$
   (b) (15 points) With the points you found above, compute $(f_{xx}f_{yy} - f_{xy}f_{yx})(a, b)$.
2. (30 points) Find the equation of the tangent plane to $f(x, y) = \ln(2x + y)$ at $(-1, 3)$. You must show work.