(1) Use Lagrange multipliers to find maximum and minimum value of the function \( f(x, y, z) = x^2 + y^2 + z^2 \) on \( x^4 + y^4 + z^2 = 1 \).

(2) If \( R = [-1, 2] \times [0, 2] \), use a Riemann sum with \( m = 3 \), \( n = 2 \) to estimate the value \( \int \int_R (y^2 - 2x^2) \, dA \). Take the sample points to the upper left corners of the square.