1. For the function \( f(x, y) = 3x^3 + y^2 - 9x + 4y \), find relative maximum, relative minimum and saddle point.

2. Sketch the surface \( 2x + 6y + 3z = 12 \).
1. Find trace of the surface \( x^2 - y^2 + z^2 = 1 \) in the \( xy \)-plane.

2. For \( f(x, y, z) = \sin(3x + yz) \), find \( f_{xxyz}(0, 0, 0) \).
1. Find local maximum, local minimum and saddle point for the function
   \[ f(x, y) = xy - y^2 - x^3. \]

2. Find equation of a plane that is parallel to \(xz\)-plane and passes through \((7, -4, -2)\).