

3. Use Lagrange multipliers to find the absolute maximum and absolute minimum of the function $f(x, y, z) = x + y + z$ on the surface $x^2 + 2y^2 + 3z^2 = 66$.

4. Find the extreme values of the function $f(x, y) = e^{-xy}$ on the region defined by $x^2 + 4y^2 \leq 1$.