Problem 1. Evaluate the integral
\[ \int_0^1 \int_y^1 e^{-x^2} \, dx \, dy \]

Problem 2. Evaluate the integral
\[ \int_D x^2 + y^2 \, dA, \]
where \( D \) is a disc centered at the origin and radius 3.

Problem 3. Evaluate the integral
\[ \int_D x^2 - y^2 \, dA, \]
where \( D \) is the region bounded by the circles \( x^2 + y^2 = 9 \) and \( x^2 + y^2 = 25 \).

Problem 4. Find the volume of a solid bounded by the planes \( x = 0 \), \( y = 0 \), \( z = 0 \) and the paraboloid \( z = 9 - x^2 - y^2 \).

Problem 5. Find the volume of the solid that lies under the paraboloid \( z = 4x^2 + 4y^2 \) above the xy-plane, and inside the cylinder \( x^2 + y^2 = 6y \).