

Show all work. 5 points each.

1. Find  $\iint_D 9 - x^2 - y^2 dA$  where  $D = \{(x, y) | x^2 + y^2 \leq 9\}$  .

2. Find the Jacobian of the transformation  $x = u^2 - v^2$  ,  $y = 2uv$