

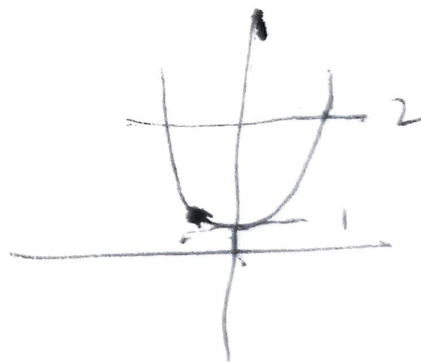
$$M = \frac{2xe^y}{1+x^2}$$

$$N = e^y \ln(1+x^2) + 2x$$

Since area is closed

Use Green's theorem

$$\iint \left(\frac{\partial N}{\partial x} - \frac{\partial M}{\partial y} \right) dx dy$$



$$2 \int_{x=0}^1 \int_{y=1+x^2}^2 dx dy$$

Soln