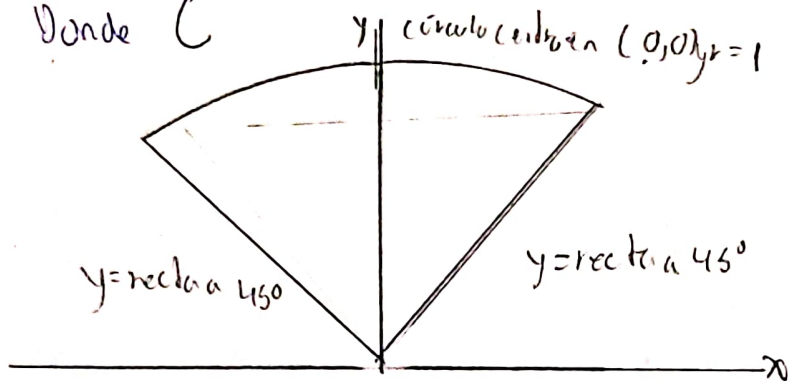


Evalue la integral

$$\int_C (\sin(x^2) - 16y) dx + (4e^y + 3x^2) dy$$

Donde C



$$W = \oint_C F \cdot dr$$

$$= \oint_C (\sin(x^2) - 16y) dx + (4e^y + 3x^2) dy$$

$$W = \iint_R (6x + 16) dA$$

$$R: 0 \leq r \leq 1; \frac{\pi}{4} \leq \theta \leq \frac{3\pi}{4}$$

$$W = \int_{\pi/4}^{3\pi/4} \int_0^1 (6r \cos \theta + 16) r dr d\theta$$

$$= \int_{\pi/4}^{3\pi/4} (2r^3 \cos \theta + 8r^2) \Big|_0^1 d\theta$$

$$= \int_{\pi/4}^{3\pi/4} (2 \cos \theta + 8) d\theta = 4\pi$$

$$4\pi$$