

A. 10.

$$f_x(x,y) = 1-y \rightarrow 1-y=0 \rightarrow y=1$$

$$f_y(x,y) = 1-x \rightarrow x=1$$

titik $(1,1)$, $(0,2)$, $(0,0)$ dan $(4,0)$

di titik $(4,0)$ menghasilkan maksimum
di titik $(0,0)$ menghasilkan minimum

B. 16

$$f_x(x,y) = -ye^{-xy} \quad , \quad g_x(x,y) = 2x$$

$$f_y(x,y) = -xe^{-xy} \quad , \quad g_y(x,y) = 8y$$

$$\left. \begin{aligned} -ye^{-xy} &= 2x\lambda \\ -xe^{-xy} &= 8y\lambda \end{aligned} \right\} y = \pm \sqrt{\frac{1}{8}}$$

$$x^2 + 4y^2 \leq 1 \rightarrow x \leq \pm \sqrt{\frac{1}{2}}$$

coba titik $(\pm \sqrt{\frac{1}{2}}, \pm \sqrt{\frac{1}{8}})$

di titik $(\sqrt{\frac{1}{2}}, \sqrt{\frac{1}{8}})$ dan $(-\sqrt{\frac{1}{2}}, \sqrt{\frac{1}{8}})$ jadi
maks

sisanya jadi min