6.25.

$$D=\left\{(x,y):(x-1)^2+(y+3)^2\le 6+1+9=16\right\}$$

Sätt:

$$\begin{cases} x-1=r\cos\theta \\ y+3=r\sin\theta \end{cases} \qquad D_{r\theta}:\ \begin{cases} r:0\to 4 \\ \theta:0\to 2\pi \end{cases} \qquad dxdy=rdrd\theta$$

$$V=\iint_D xydxdy=\iint_{D_{r\theta}}(1+r\cos\theta)(-3+r\sin\theta)rdrd\theta$$

$$V=\iint_{D_{r\theta}}(-3-3r\cos\theta+r\sin\theta+r^2\cos\theta\sin\theta)rdrd\theta$$

$$V = \int_{r=0}^{4} -3 \; 2\pi r dr = -3\pi \; 4^2 = -48\pi$$

SVAR:

$$\iint_D xy dx dy = -48\pi$$