938.c.

$$V = \iint_D \frac{\sin x}{(x^2+y^2)^{3/2}}\,dxdy$$

$$D = \left\{(x,y) \,:\, x^2+y^2 \geq 1\right\}$$

$$|V| \leq \iint_D \frac{|\sin x|}{(x^2+y^2)^{3/2}}\,dxdy \leq \iint_D \frac{1}{(x^2+y^2)^{3/2}}\,dxdy$$

$$\iint_D \frac{1}{(x^2+y^2)^{3/2}}\,dxdy = \begin{cases} x = r\cos v \\ y = r\sin v \\ D_{rv} = \{(r,v) \,:\, 1 \leq r,\ 0 \leq v \leq 2\pi\} \end{cases} \quad dxdy = rdrdv \quad = \iint_{D_{rv}} \frac{rdrdv}{r^3}$$

$$\iint_D \frac{1}{(x^2+y^2)^{3/2}}\,dxdy = 2\pi\left[-\frac{1}{r}\right]_{r=1}^{\infty} = 2\pi$$

$$|V| \le 2\pi$$

Integralen $V = \iint_D \frac{\sin x}{(x^2+y^2)^{3/2}}\,dxdy$ är konvergent .