$$\iint_S \left(\frac{2x}{\pi} + \sin(y^2)\right)x + \left(e^z - \frac{y}{\pi}\right)y + \left(\frac{2z}{\pi} + \sin^2 y\right)z \, \partial\sigma$$

$$= \iint \frac{2x}{\pi} + \sin(y^2)\,\hat{i} + \left(e^z - \frac{y}{\pi}\right)\hat{j} + \left(\frac{2z}{\pi} + \sin^2 y\right)\hat{k} \cdot \hat{n} \, \partial\sigma$$

since region is closed, use divergence theorem

$$\Rightarrow \iiint \nabla F \, \partial v = \iiint \frac{2}{\pi} - \frac{1}{\pi} + \frac{2}{\pi} \, \partial v = \frac{3}{\pi} \times \frac{4}{3} \times \pi \times (1)^3 = 4 \text{ A}$$