

~~Let~~ Let $\langle P, Q \rangle = \langle x^2 + y^2, xy \rangle$.

① Find $\text{div} \langle P, Q \rangle$ & $\text{curl} \langle P, Q \rangle$. (2D)

② Find the flux through ∂B where

$$B = \{(x, y) \mid 0 \leq x \leq 2 \text{ \& } 3 \leq y \leq 8\}$$

③ Find the circulation along ~~∂B~~ ∂D where

$$D = \{(x, y) \mid (x-5)^2 + (y+1)^2 \leq 2^2\}.$$

④ Find the circulation along ∂B .

⑤ Find the flux through ∂D .

