

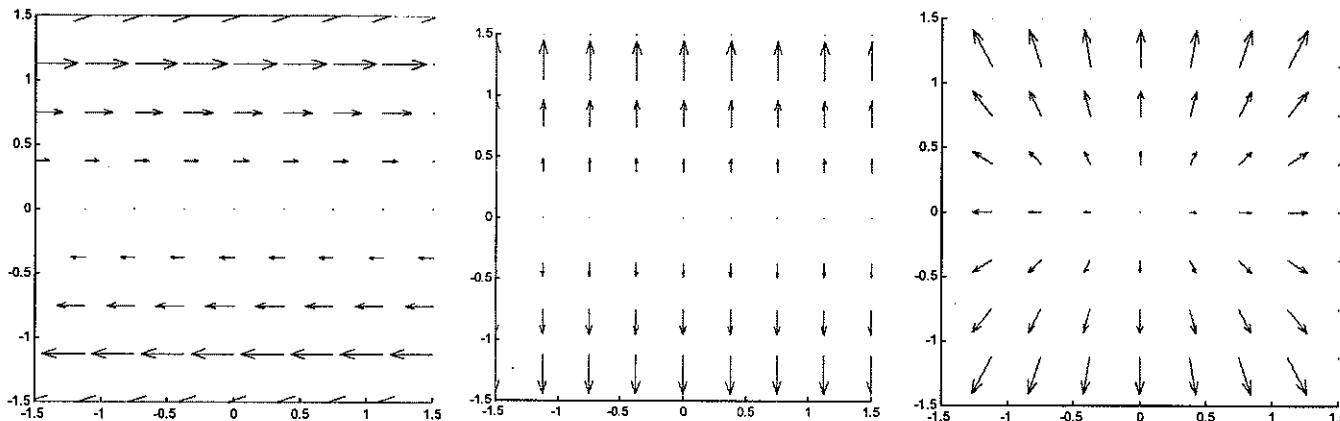
Question: What will guarantee that $F(x,y)=yi+g(x,y)j$ is not a gradient vector field?

Choices:

- 1) $g(x,y)$ is a function of y only
- 2) $g(x,y)$ is a function of x only
- 3) $g(x,y)$ is always larger than 1
- 4) $g(x,y)$ is a linear function

Question: Which of the below vector fields is not path independent?

Image:



Choices:

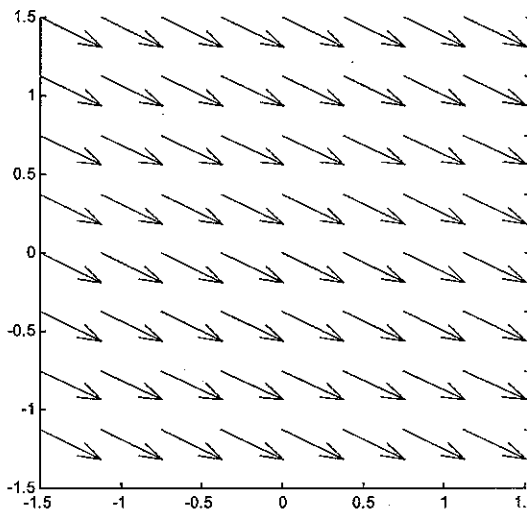
- 1) the one on the left
- 2) the one in the middle
- 3) the one on the right

Topic: Vector Calculus

Question: Suppose C is the path consisting of a straight line from $(-1,0)$ to $(1,0)$ followed by a straight line from $(1,0)$ to $(1,1)$. Is the line integral along this path:

Image:

eg. $\int_C F \cdot T ds$



Choices:

- 1) positive?
- 2) zero?
- 3) negative?

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