

Show all work. 5 points each.

1) Sketch at least 5 vectors in the vector field \mathbf{F} with $\mathbf{F}(x, y) = \frac{y\mathbf{i} + x\mathbf{j}}{\sqrt{x^2 + y^2}}$

2) Compute the line integral $\int_C xy \, dx + (x - y) \, dy$ where C is the line segment from $(2, 0)$ to $(3, 2)$. OK to leave at evaluation bar.