

General Stuff

- Office Hours
 - T: 12:30 - 1:30, Th: 10 - 11
- Quiz 5 Today! (Thursday 3/25)
- Topics include 8.1 and 8.3
 - 1 problem
 - 15 minutes to take quiz
 - 5 minutes to upload to gradescope
 - 11:15 - 11:45 questions before quiz
 - 11:45 - 12:00 quiz
 - 12:00 - 12:05 uploading
- Lab 09 after class today!

1. Let C be the closed curve $c(t) = (3 + 2 \cos(t), -2 + 3 \sin(t))$ from $0 \leq t \leq 2\pi$. Compute the line integral

$$\int_C y^2 z e^{xyz} dx + e^{xyz} (xyz + 1) dy + xy^2 e^{xyz} dz.$$

2. Use the same vector field, but now compute the integral

$$\int_K y^2 z e^{xyz} dx + e^{xyz}(xyz + 1) dy + xy^2 e^{xyz} dz$$

where K is the curve $p(t) = (-t + 3, t^2 - 1, t)$ from $t = 0$ to $t = 2$.

3. Let B be the unit box with boundary ∂B . Denote the clockwise direction of the boundary by ∂B_{cw} . Evaluate the line integral

$$\int_{\partial B_{\text{cw}}} y^2 dx - x^2 dy.$$