

General Stuff

- Office Hours
 - T: 12:30 - 1:30, Th: 10 - 11
- Midterm 5 Thursday 4/1
- Topics include 8.1, 6.1, 6.2
 - 2 problems
 - 30 minutes to take quiz
 - 5 minutes to upload to gradescope
 - 11:15 - 11:25 questions before quiz
 - 11:25 - 11:55 quiz
 - 11:55 - 12:05 uploading
- Lab 09 due tonight!

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

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

2. Let Q be the quarter unit circle from $0 \leq \theta \leq \pi/2$. Find the integral

$$\iint_Q e^{-x^2+y^2} dA.$$

3. Let D be the unit circle with counter clockwise boundary ∂D . Compute the integral

$$\int_{\partial D} -y^3 dx + x^3 dy.$$

4. Let W be the region bounded by $1 \leq 2x - y \leq 3$ and $5 \leq x + 2y \leq 10$. Compute the integral

$$\iint_W y \, dA.$$