

MA 261 QUIZ 7

MARCH 5, 2018

If you do not know how to do any one of these problems, circle “**(E) I don’t know**” as your answer choice. You will receive **two points** for doing that. **Each problem** is worth **five points**. You get **two points** for writing your **full name** and **three points** for writing your **section number**.

Problem 7.1. Let D be the region bounded by $y = x^2$, $y = 0$, and $x = 1$. If the density is $\rho(x, y) = x$, find \bar{y}

- (A) $1/3$
- (B) $1/4$
- (C) $2/5$
- (D) $3/4$
- (E) I don’t know how to do this

Problem 7.2. Compute $\iint_D e^{x^2+y^2} dA$, $D = \{x^2 + y^2 \leq 1\}$ by changing to polar coordinates.

To clarify, D is the unit disk centered at the origin.

- (A) 1
- (B) $\pi(e - 1)$
- (C) e^π
- (D) πe
- (E) I don’t know how to do this

Problem 7.3. Compute $\int_0^1 \int_{2x}^2 e^{y^2} dy dx$ by reversing the order of integration.

- (A) $e^4/4$
- (B) e^4
- (C) $e^4 - 1$
- (D) $e^4/4 - 1/4$
- (E) I don’t know how to do this