

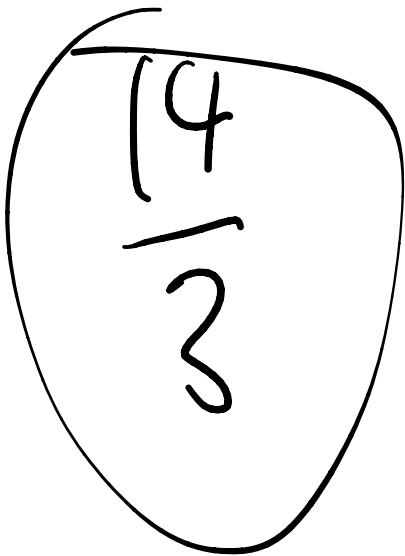
"QUIZ" for Lecture 12

NAME: (print!) Fayed Raza Section: 6

E-MAIL SCANNED .pdf OF COMPLETED QUIZ to DrZcalc3@gmail.com (Attachment: q12FirstLast.pdf) ASAP BUT NO LATER THAN Oct. 19 8:00pm

1. Calculate the iterated integral

$$\int_1^2 \int_{-1}^1 (x + y^2) dx dy$$



$$\int_{-1}^1 x + y^2 dx$$

$$\left. \frac{x^2}{2} + xy^2 \right|_{-1}^1$$

$$\frac{1}{2} + y^2 - \left( \frac{1}{2} + y^2 \right)$$

$$2 \int_1^2 y^2 dy$$

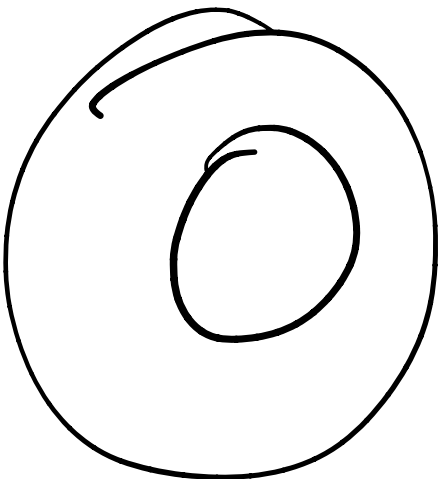
$$\left. \frac{y^3}{3} \right|_1^2$$

$$2 \left( \frac{8}{3} - \frac{1}{3} \right) = 2 \left( \frac{7}{3} \right) = \frac{14}{3}$$

2. Calculate the double integral

$$\iint_R \frac{x^2 y}{x^3 + 1} dA$$

$$R = \{(x, y) \mid 0 \leq x \leq 1, -1 \leq y \leq 1\}$$



$$\int_0^1 \int_{-1}^1 \frac{x^2 y}{x^3 + 1} dy dx$$

$$\frac{x^2}{x^3 + 1} \int_{-1}^1 y dy$$

$$\int_0^1 0 dx = 0$$