"QUIZ" for Lecture 12

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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

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

$$\int_1^2 \left(\frac{1}{2}x^2 + xy^2\right) dy$$

$$\int_1^2 2y^2 dy = \frac{2}{3}(2^3 - 1^3) = \frac{14}{3}$$

2. Calculate the double integral

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

$$R = \{(x, y) \mid 0 \le x \le 1\,,\ -1 \le y \le 1\} \quad .$$

$$\int_0^1 \int_{-1}^{1} \frac{x^2 y}{x^3 + 1}\, dy\, dx = \int_0^1 0\, dx = 1$$