"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(x + y^2) dx x=-1..1
=x^2/2+xy^2=2y^2

int(2y^2)dy y=1..2
=2y^3/3=2*2^3/3-2*1^3/3=14/3

Ans:14/3

2. Calculate the double integral

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

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

int (intx^2y/x^3+1)dydx x=0..1 y=-1..1

intx^2y/x^3+1dy y=-1..1
=x^2/x^3+1 * int y dy y=-1..1
=(x^2/x^3+1)*y^2/2
=(x^2/x^3+1)*0=0

int 0 dx x=0..1
0x=0