

Calc 3 - Assignment # 19

Note Title

10/26/2011

② Evaluate $\iint_R 5-x \, dA$, $R = [0,5] \times [0,1]$

both algebraically and geometrically.

③ Use Fubini's Theorem to compute:

a) $\int_0^1 \int_0^1 (1+4xy) \, dx \, dy$

b) $\int_0^1 \int_1^2 (4x^3 - 9x^2y^2) \, dy \, dx$

c) $\int_0^1 \int_0^1 xy \sqrt{x^2+y^2} \, dy \, dx$

d) $\int_0^1 \int_0^1 \sqrt{s+t} \, ds \, dt$

e) $\iint_R \frac{1+x^2}{1+y^2} \, dA$, $R = [0,1] \times [0,1]$

f) $\iint_R \frac{x}{x^2+y^2} \, dA$, $R = [1,2] \times [0,1]$

④ Find the volume under $z = 4 + x^2 - y^2$ and above $R = [-1,1] \times [0,2]$