

Math 203 — Double integrals

Problem 1. Compute the following double integrals.

a. $\int_0^3 \int_0^1 (5x^3 + 3xy - 4y^2) \, dy \, dx$

b. $\int_0^\pi \int_0^{\pi/2} (x^2 \sin y + \cos x) \, dx \, dy$

c. $\int_1^2 \int_0^2 (y + x/y^2) \, dx \, dy$

d. $\int_0^e \int_1^e 2x/y \, dy \, dx$