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Analysis II — Quiz 7 06.05.08

Q7.1. Compute the integral

$$\int_D (x+y) dx dy,$$

where D is the region in the first quadrant of \mathbb{R}^2 bounded by two axes and the curves $x^2 + y^2 = \frac{1}{2}$ and $x^2 + y^2 = 1$. State the theorem you used and check that all hypotheses are satisfied.