

# Integrale Improprio 1

Titolo nota

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$$B = \{ (x, y) : x^2 + y^2 \leq 1, x \geq 0, y \geq 0 \} = \{ (p, \theta) : 0 \leq p \leq 1, 0 \leq \theta \leq \frac{\pi}{2} \}$$

$$\int_B \frac{1}{x^2 + y^2} dx dy = \int_0^1 \underbrace{p}_{\frac{1}{J}} dp \int_0^{\pi/2} \frac{1}{p^2(1)} d\theta = \frac{\pi}{2} \cdot \int_0^1 \frac{1}{p} dp < +\infty$$

$\uparrow$   
 $1 < 2$