

Evaluate

1. 
$$\int_0^2 \int_{-\sqrt{4-x^2}}^{\sqrt{4-x^2}} \frac{dydx}{\sqrt{x^2 + y^2}}$$

2. 
$$\int_0^2 \int_0^{\sqrt{2y-y^2}} \sqrt{x^2 + y^2} \, dx dy$$

$$3. \int_0^3 \int_0^{\sqrt{9-x^2}} e^{x^2+y^2} dy dx$$