1. Compute the double integral
\[ \int_0^{\pi/2} \int_1^e \frac{\sin y}{x} \, dx \, dy. \]

2. Compute the double integral of \( f(x, y) = 1 - x \) over the triangle \( R \) whose vertices are \((0, 0), (1, 1)\) and \((-2, 1)\).
1. Compute the double integral
\[ \int_{0}^{1} \int_{0}^{x} e^{y/x} \, dy \, dx. \]

2. Compute the double integral of \( f(x, y) = xy \) over the first-quadrant quarter circle bounded by \( x^2 + y^2 = 1 \) and the coordinate axes.