 Function: f(x, y) = e^{x + y}

 Region of Integration:
   x from 0.00000 to 0.69315
   y from 0.00000 to 1.09861

 Step 1 — Set up the integral:
   ∬ f(x, y) dx dy = ∫ₐᵇ ∫c^d f(x, y) dy dx

 Step 2 — Inner integral:
   ∫ from 0.00000 to 1.09861 of e^{x + y} dy = 2.0 e^{x}

 Step 3 — Outer integral:
   ∫ from 0.00000 to 0.69315 of (2.0 e^{x}) dx = 2.0

 Symbolic result: 2.0000000000

 Numerical result: 2.0000000000
 Estimated error: 4.43e-14