Quiz–Green's Theorem

Let $\vec{c}$ be a positively oriented path along the boundary of the triangle with vertices $(0,0)$, $(1,0)$, and $(0,2)$. Compute

$$\int_{\vec{c}} e^y \, dx + e^x \, dy.$$

Show all work and clearly mark your final answer. No calculators/notes allowed. Partial credit will be given for correctly explaining any steps you're unable to carry out, as well as demonstrating correct methods with algebraic errors.