1. (3 points) Let 

\[ f(z) = e^{\frac{5\pi}{2}} \frac{z^3 + 7}{z^7(z^2 + 4)^3}. \]

Let \( C \) be the disjoint union of the piecewise \( C^1 \), simple, closed curves \( C_0, C_1, C_2 \) in the figure below, oriented as in the figure below.

Compute \( \int_C f(z) \, dz \).

*Note:* A piecewise \( C^1 \) curve is called piecewise smooth in the textbook.