7. [12 points] A mysterious three-dimensional abstract sculpture has appeared on the major university’s central campus. Alex, being a particularly astute calculus student, notes that the volume is given by

\[ V = \int_1^2 (e^{-x} + 1)^2 \, dx, \]

where \( x \) is in meters.

(a) [4 points of 12] What does the integrand of Alex’ integral tell you about the shape of the sculpture?

(b) [4 points of 12] Suppose that the sculpture was placed on a set of \( x-y \) axes. Sketch the base of the sculpture, labeling all important dimensions and features.

(c) [4 points of 12] Sketch and/or carefully explain what the shape of the sculpture is.