Section 5.3  Example 2.

Determine the area of the region bounded by \( y = x, \ y = e^x, \ -1 \leq x \leq 1. \)

Sketch:

Here the height of the rectangle is given by \( e^x - x \) and the width by \( dx \).

So the area is given by \( \int_{-1}^{1} (e^x - x) \, dx \approx 2.35040238729 \).