Please read the following instructions carefully:

- There are **two problems** in this quiz.

- The point distribution is given in the table below.

- Please write each solution on a separate page.

- This is a group quiz. Feel free to discuss the problems with your teammates. **You must, however, write and turn in your own work.**

- Upload your work to Gradescope.

Question:	1	2	Total
Points:	5	5	10

1. (5 points) Let R be the region between the graphs of $f(x) = 1 + \sqrt{x}$ and $g(x) = e^{-x}$ over the interval $[0, 1]$. Find the volume of the solid of revolution obtained by revolving the region R around the x-axis.

2. (5 points) Let $f(x) = \ln(x^2 - 1)$ for $2 \leq x \leq 5$. Set up the integral to compute the arc length. **Do NOT evaluate the integral.**