

You are encouraged to work in groups of two to four on this assignment and make a single group submission. Each problem is worth 5 points for correct and clearly justified answers

Consider the solid obtained by rotating the region between  $y = 1/x$  and the  $x$ -axis on the interval  $[1, \infty)$  around the  $x$ -axis. This solid is traditionally called **Gabriel's Horn**.

1. Find the volume of Gabriel's Horn.
2. Find the surface area of Gabriel's Horn.

