

Name _____

1. (4 points) The region between the x -axis and the curve $y = e^{-x}$ on the interval $[0, \infty)$ is revolved around the x -axis. Compute the resulting volume.

2. (3 points each) Evaluate the following integrals, being sure to use proper notation for each step in your work.

(a) $\int_1^4 \frac{dx}{(x-1)^{3/2}}$

(b) $\int_2^{\infty} 5xe^{-x} dx$