
October 4, 2017

Score _____

1. (4 points) The 1st-quadrant region bounded by the graphs of $y = x^2$ and $y = x^3$ is rotated about the line $y = 1$ to form a solid. Find its volume.
2. (4 points) The region bounded by the graphs of $2x + 3y = 6$, $y = 0$, and $x = 0$ is rotated about the line $x = 4$ to form a solid. Find the volume of the solid.
3. (2 points) Set up the definite integral required to find the length of the graph of $y = e^{2x}$ from the point where $x = 0$ to the point where $x = 1$. Use your calculator to approximate the value of your integral.