

175 §2- CALCULUS II - Quiz 4

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Name _____

Please show all your work, not just final answers. Do not skip any nontrivial steps. Just the right answer does not count. Some computations and then an unjustified jump to the right answer, is not sufficient, and will only receive partial credit, the same as if only the computations had been given without the final answer. Numerical approximations (as provided, for example, by a calculator) are not acceptable. You may assume, if needed, the formula

$$\int \sec \theta \, d\theta = \ln |\sec \theta + \tan \theta| + C.$$

1. Find the volume of the solid generated by rotating about the line $x = \pi$ the region bounded by the x -axis and the curve $y = x \sin(x)$ for $0 \leq x \leq \pi$.

2. Evaluate $\int_0^3 \sqrt{x^2 + 6x} \, dx$.