

MATH U242
QUIZ #4

Name _____

For full credit show all of your work.

Exercise 1 (3pts). Find the value of the improper integral, if it exists: $\int_4^{\infty} e^{-y/2} dy$.

Exercise 2 (4pts). Find the volume of the solid defined by rotating the bounded region about the x -axis,
 $y = x^3$, $y = x$, $x \geq 0$.

Exercise 3 (3pts). Set up, but do not evaluate, the integral for the arc length of the following curve
 $x = e^t + e^{-t}$, $y = 5 - 2t$, $0 \leq t \leq 3$.