MTH 1126 Test #2 - Part 2 11am Class

SPRING 2022

Pat Rossi Name _____

Instructions. Show CLEARLY how you arrive at your answers.

1. Compute the length of the arc of the graph of the function $f(x) = \frac{4}{3}x^{\frac{3}{2}} + 2$ from the point $(0, 2)$ to the point $(6, f(6))$.

2. Compute the volume of the solid of revolution generated by revolving the bounded region described below about the line $x = -1$. (Use the "Shell Method.")

   The region bounded by: the y-axis, the graph $y = x^2$, and the line $y = 4$

   Use the "five step method" (partition the interval, sketch the i^{th} rectangle, form the sum, take the limit)

Extra Wow! (5 points!)

Compute the length of the arc of the graph of the function $f(x) = x^4 + \frac{1}{32}x^{-2}$ from the point $\left(1, \frac{33}{32}\right)$ to the point $\left(2, \frac{2049}{128}\right)$.