

Main Exercises Week 7

MATH 131-02: Calculus II

Your Name (Print): _____

Due: Wednesday, March 4, 2020 at 1:30pm

Follow the general guidelines for the Main Exercises assignments (the salmon colored hand-out). Complete your work on this handout. Be sure to **staple** together your pages if you have more than one. Neatness and correct mathematical grammar is appreciated, makes a good first impression, and can earn you a bonus point!!!

Remember: Your write-up should be **your own**. You may discuss these problems with others, but **you should be alone when you write them up**, using only outlines of any group or Intern discussions. **EXPLAIN** and **SHOW YOUR WORK!!!** Final answers will not receive full credit without supportive explanations.

1. Find the length of the curve $x = \frac{1}{3}\sqrt{y}(y - 3)$ on the interval $0 \leq y \leq 9$.

2. Find the volume of the solid obtained by revolving the region bounded by the curves $y = \sqrt{x}$, $y = -\frac{1}{2}x + 4$ and $y = 1$ about the line $y = -6$. Be sure to include a complete diagram in your solution – labeled functions and points of intersection, shaded region, estimating rectangle(s), etc. Make sure your diagram is large enough to see!

With whom did you work on this assignment? (List names or state that you worked alone.)

How much time did you spend on this main exercises assignment? _____