

Main Exercises Week 7

MATH 131: Calculus II, Sections 2 and 3

Your Name (Print): _____

Follow the general guidelines for the Main Exercises assignments (the salmon colored handout). Be sure to **staple** together your pages if you have more than one, and include your **name** at the top. Be **NEAT** and **SHOW YOUR WORK!!!**

Due: at the beginning of class on Friday, October 16th

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. Be sure to show your work! How you get there is more important than the final answer. Make sure you read the complete question with all the directions and hints before starting a problem. **If you use u -substitution, SHOW IT, no matter how small; do not just do it in your head.**

1. 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.
2. Do Exercise 10 from Section 6.5 in the text (page 450). You do not need to graph the function, but be sure to show detailed work and not skip steps.