

Main Exercises Week 7

MATH 131: Calculus II, Section 1

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. Neatness is appreciated and makes a good first impression!!!

Due: at the beginning of class on Wednesday, March 5th

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/TA 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.

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 $y = 4$. Be sure to include a complete diagram in your solution – labeled points of intersection, shaded region, estimating rectangle(s), etc.
2. Do Exercise 4 from Section 6.5 in the text (page 418). Be sure to show detailed work and not skip steps.