

Section 5.2: Definite Integrals

MATH 131: Calculus II

Your Name (Print): _____

Due: at the beginning of class on Monday, January 27, 2020

After reading Section 5.2 (pages 353-363 in the text), respond to the following questions **on this handout**. Be sure to staple your pages together before turning it in if they are not double sided. **You must answer all parts to all questions to earn full credit!!! Also, use FULL SENTENCES to answer questions that require words.** See the salmon homework guidelines handout for details. You are encouraged to take additional notes wherever you are keeping your class notes.

Response Section

- State the complete definition for Net Area.
- (a) Draw a graph of the function $f(x) = x - 1$. Label your axes.

(b) Shade in the areas on your above diagram bound between the function and the x -axis on the interval from $x = 0$ to $x = 4$. Draw an equation in **shapes** that represents the net area (Net Area = shape \pm shape). WithOUT actually calculating the Net Area, determine if the Net Area will be positive or negative. Explain in a sentence.
- State the definition of the Definite Integral.

4. State Theorem 5.2: Integrable Functions.

5. Use a **diagram and geometry** to explain what the value of $\int_a^b 4 \, dx$ is. Do NOT use antidifferentiation formulas to do this!

Questions/Exercise Section

6. Write down at least two questions you have on the reading. OR if you have NO questions, do exercise 48 in Section 5.2 (page 365). Be sure to explain your answer carefully in a sentence and/or with diagrams for full credit! See the salmon homework guidelines handout for details.

Reflection Section

7. Write **two or three** sentences reflecting on the progress of your work so far in the course. See the salmon homework guidelines handout for details.

Time Section

8. How much time did you spend on this reading assignment? _____