

Homework Sections 7.3.

I. Read Example 1 page 394. Do problem #14 page 398, writing your solutions in a similar fashion to the way that the authors of the book wrote the solution to Example 1 page 394. In addition, for each part, draw a diagram showing the regions whose areas you are calculating. (Here are some example diagrams, for reference: Figure 4 page 389 shows the area under a function and between $x=0$ and $x=2$. Figure 7 page 390 shows the same area being approximated by rectangles.)

II. Do problem #16 page 398. Again, write out your explanation as if you were writing an example for a text book. Note that this problem asks you to find the true areas, only; you do not need to approximate with rectangles for this problem.

III. Do problems #18 and #20 on page 398. In addition, draw a graph of the function and shade the region whose area you are calculating.

IV. Read problem 25 page 399.

A. Say the function whose graph is shown is called $f(t)$. What are the units on $f(t)$?

What are the units on the t ? What are the units on $\int_0^8 f(t)dt$?

B. Copy the graph into your homework, making the diagram large enough to read. Draw in the rectangles you will use to solve the problem, and complete the calculation.