

Paragraph Assignment, Week 7
Due Thursday, 3/2/00 at the start of lab.

Area vs. Arc Length

The area under the graph of a function and the arc length of the graph of a function are defined in similar ways; likewise, they are approximated by similar procedures. **Describe the general process that is common to both approximations, and then describe what you specifically do for each of the two calculations.** You might consider the following questions (among others):

1. Both calculations involve making a number of approximations and adding them up to arrive at a final approximation. *What* are these sub-approximations approximations of?
2. What are the steps common to each approximation? How do the approximations differ?

Do not, however, write a paragraph each responding to these questions. The above are merely examples, in no particular order, of what you might want to consider. **YOUR PARAGRAPH SHOULD ADDRESS MORE THAN JUST THESE ISSUES!!**

Various instructions, warnings, and notes:

1. Pay attention to the following instructions. You will lose many points for violating them.
2. Do not include any pictures or sketches with your paragraph. You must describe in words, not in pictures.
3. Do not choose a particular function $f(x)$, even as an example, in your paragraph.
4. Your paragraph should contain almost no notation at all.
5. The mathematical concepts involved in this paragraph are very simple. Do not try to make your paragraph sound fancy; write it so that it is as clear and simple as possible.
6. There is no need to write an introduction and a conclusion to the problem. Don't pad your paragraph with fluff like: "In conclusion, arc length is very important and easy to calculate." Just answer the questions above – no more, no less.
7. As always, the paragraph must be jointly written by all members of your lab group.