Reading Assignment 11 (Due Wednesday 7/21/21 by 12:55 PM)

Basic learning objectives: These are the tasks you should be able to perform with reasonable fluency **when you arrive at our next class meeting**. Important new vocabulary words are indicated in italics.

1. Compute the mass of a *lamina* by integrating function that describes the density at each point.

2. Compute the area of a region using a double integral.

Advanced learning objectives: In addition to mastering the basic objectives, here are the tasks you should be able to perform **after class, with sufficient practice:**

1. Compute the coordinates of the center of mass of a lamina using double integrals.

2. State the definition of a *joint probability density function*. Verify that a given function is a joint probability density function.

3. Use a joint probability density function and the double integral to compute probabilities.

Directions: Read the following sections of the book:

- Section 11.4.1 and 11.4.2.

and complete the following tasks along the way. If an Activity is not listed, you do not need to complete it (although you are welcome to read it). Turn your write up in via gradescope. You do not need to write the questions down, as long as you clearly indicate the question number.

1. Preview Activity 11.4.1.