

## Chapter 4: The Average and the Standard Deviation

This is an important and fundamental chapter, especially sections 4.2, 4.3, 4.5, and 4.6.  
It is a foundation for the entire course. The calculations in sections 4.2 and 4.6 must be mastered.

Section 4.1: An introduction to the chapter. Read lightly.

Section 4.2: Very Important Idea: box on page 59.

Suggested problems for study: A: pages 60–61: 1–4, and of lesser importance: 7,8.

Section 4.3: Suggested problems for study: B: page 65: 1–5

Section 4.4: An important procedure used in section 4.6 to compute the standard deviation.

Suggested problems for study: C: page 67: 1, 3, 4, 5 (2 also, of lesser importance)

Section 4.5: Very Important Observations: boxes on page 67 and page 68.

Suggested problems for study: D: pages 70 and 71: 1, 2, 3, 6, 9, 10

Section 4.6: A very important procedure that will be used extensively in the course.

Spend enough time to master it.

Suggested problems for study: E: pages 72 and 73: 1–11

Technical note on the top of page 74: just read this; we will not use the alternate formula in this course.

Section 4.7: Just read it briefly. We generally do not use a statistical calculator to find the SD in this course.

The distinction between the two forms of the SD will be discussed in Chapter 26.

**Chapter Summary:** pages 76 and 77: points 1, 2, 4, 7, and 8 are important.

### Review Exercises

**Homework** (pages 74 and 75): 1, 9

### Comments on HW:

In problem 9a, be careful when answering “how much?” What’s the correct formula for an average?  
Also look at problems 4, 7, 8 on pages 74–75, and to a lesser extent problems 2, 3, 5, 6, 12 on pages 74–76.

**A useful practice problem:** ch04practice, found [here](#).