Chapter 17: The Expected Value and Standard Error

An important chapter: mostly calculations, but in 17.5 one important procedure is used to set up a box.

Section 17.1: Definition of expected value. Important: box on page 289.
Suggested problems for study: A: page 290: 1 and, of lesser importance: 2.

Section 17.2: Definition of standard error. Important boxes on pages 291 and 292.
Suggested problems for study: B: pages 293 and 294: 1, 2, 4–7; and (less important) page 292: 3.

Section 17.3: Be very careful to use the expected value and the standard error when finding standard units. The normal curve approximates chances for the sum of the draws taken with replacement from a box only if the number of draws is large and the standard units are found as previously stated using the EV and SE.
Suggested problems for study: C: pages 296–297: 1 and 2; and (less important) 3 and 8 on page 297.

Section 17.4: An important short-cut is explained in the box on page 298. Always use it when it applies.
Optional problem: D: page 299: 1 and (of lesser importance) 3.

Section 17.5: The procedure explained in the box on page 301 is of critical importance for our course. It will be used often.
Suggested problems for study: E: pg. 303 and the top of pg. 304: 1–7, 9; and (less important) 9 on pg. 304

Postscript on page 307: This is an important message for life. Don't think some hocus pocus can change a gambling game from negative to positive. Many people have failed to heed this message and gotten into deep trouble.

Chapter Summary: page 307: All six points are *very important.*

Review Exercises
Homework (pages 304 and 305): 3, 8, and 12
Comments on HW:
For problem 8, think about how counting works and whether the difference that has been derived has the same value as the count.

For problem 12, decide which of the three blanks are filled in with information from the box and which of them are filled in with information from the draws. Had the problem been asking to fill in the chance error, would you need both the box and the draws to find it?

Also look at problem 1 on the bottom of page 304. It is important.

Then try problems 4, 6, and 7 on page 305. These problems illustrate important principles.

Useful practice problems will be found under Chapter Problems.