Chapter 20: Chance Errors in Sampling

This chapter shows how to calculate important values. It is much better if we ignore the top part of page 360 up to and including the top box and use the alternate method found on the class worksheet.

Section 20.1: This introduction explains the sampling process and relates it to the chance error for a sample percentage.

Section 20.2: Important boxes are the one on page 359 and the bottom box on page 360.

Do not use the top box on page 360. A much easier formula will be presented on the class worksheet.

Suggested problems for study: A: pages 361 and 362: (all) 1–8.

Section 20.3: Make note of the box on page 364.

Suggested problems for study: B: page 366: 1–4; and (less important) 5.

Section 20.4: We will cover this section very lightly.

Suggested problems for study: C: page 370: 1, 2, 4, and 5; also (of lesser importance) 3.

Section 20.5: Just read.

Chapter Summary: pages 373 and 374: points 1, 2, 3, 5, and 6 are worth noting but none of them are very important, except point 3.

Review Exercises

Homework (pages 371–373): 1, 7, 8, 11, 12

Comments on HW:

Problem 7 is very important as it tests knowledge of a subtle part of the definition and implementation of expected value and standard error. These ideas are a basis for much of the rest of the course. Give this problem some extra thought until the results become obvious; it is not intended to be tricky.

Problem 8 is intended to be very simple, but to solve it requires using a few definitions.

For part (a) of Problem 11, either use section 17.5 or use section 20.2 employing the method favored by the text, and the answer will show up in the intermediate steps. (Our worksheet favors the alternate formula that skips those steps.)

Problem 12 doesn't really need this chapter to answer it. It is good practice in extracting the key word in the question. In the last sentence one word clues us in as to what is needed. What is that word? To what previous chapter will that direct us?

Also look at problems 2–6, 9, and 10 on pages 371–373. Of these problems, 3 and 5 are most useful.