

b. For the physicians given the bottles labeled with a ratio, find the percentage of correct dosage calculations; then express it as a probability.

c. Does it appear that either group did better? What does the result suggest about drug labels?

26. Which Group Did Worse?

a. For the physicians given the bottles labeled with a concentration, find the percentage of wrong dosage calculations; then express it as a probability.

b. For the physicians given the bottles labeled with a ratio, find the percentage of wrong dosage calculations; then express it as a probability.

c. Does it appear that either group did worse? What does the result suggest about drug labels?

Survey Refusals. In Exercises 27–32, refer to the following table summarizing results from a study of people who refused to answer survey questions (based on data from “I Hear You Knocking but You Can’t Come In,” by Fitzgerald and Fuller, *Sociological Methods and Research*, Vol. 11, No. 1). In each case, assume that one of the subjects is randomly selected.

	Age					
	18–21	22–29	30–39	40–49	50–59	60 and over
Responded	73	255	245	136	138	202
Refused	11	20	33	16	27	49

27. Survey Refusals What is the probability that the selected person refused to answer? Does that probability value suggest that refusals are a problem for pollsters? Why or why not?

28. Survey Refusals A pharmaceutical company is interested in opinions of the elderly, because they are either receiving Medicare or will receive it soon. What is the probability that the selected subject is someone 60 and over who responded?

29. Survey Refusals What is the probability that the selected person responded or is in the 18–21 age bracket?

30. Survey Refusals What is the probability that the selected person refused to respond or is over 59 years of age?

31. Survey Refusals A market researcher is interested in responses, especially from those between the ages of 22 and 39, because they are the people more likely to make purchases. Find the probability that a selected subject responds or is between the ages of 22 and 39.

32. Survey Refusals A market researcher is not interested in refusals or subjects below 22 years of age or over 59. Find the probability that the selected person refused to answer or is below 22 or is older than 59.

In Exercises 33–38, use these results from the “1-Panel-THC” test for marijuana use, which is provided by the company Drug Test Success: Among 143 subjects with positive test results, there are 24 false positive results; among 157 negative results, there are 3 false negative results. (Hint: Construct a table similar to Table 4-1, which is included with the Chapter Problem.)

33. Screening for Marijuana Use

a. How many subjects are included in the study?

b. How many subjects did not use marijuana?

c. What is the probability that a randomly selected subject did not use marijuana?