**Individual Assignment:** Problem Exercises

**Differentiate** between permutations and combinations from *Introduction to Business Statistics*. Follow all directions and show all of your work.

o    Ch. 5: Problem 5.50

o    Ch. 5: Exercise 5.51

**5.50** A tax accountant has three choices for the method of treating one of a client’s deductions. After this choice has been made, there are only two choices for how a second deduction can be treated. What is the total number of possibilities for the treatment of the two deductions?

**5.51** A committee consists of eight members, each of whom may or may not show up for the next meeting. Assuming that the members will be making independent decisions on whether or not to attend, how many different possibilities

exist for the composition of the meeting?

**Calculate** normal probability distributions in Ch. 7 for Exercises 43 & 44 from *Statistical Techniques in Business and Economics*. Follow all directions and show all of your work.

**43.**The weights of cans of Monarch pears follow the normal distribution with a mean of 1,000 grams and a standard deviation of 50 grams. Calculate the percentage of the cans that weigh:

**a.** Less than 860 grams.

**b.** Between 1,055 and 1,100 grams.

**c.** Between 860 and 1,055 grams.

**44.**The number of passengers on the *Carnival Sensation* during one-week cruises in the

Caribbean follows the normal distribution. The mean number of passengers per cruise is1,820 and the standard deviation is 120.

**a.** What percent of the cruises will have between 1,820 and 1,970 passengers?

**b.** What percent of the cruises will have 1,970 passengers or more?

**c.** What percent of the cruises will have 1,600 or fewer passengers?

**d.** How many passengers are on the cruises with the fewest 25 percent of passengers?