FAPP 9e Writing Projects – Chapter 5

1. Go online and look for information about "statistical quality control" and "six-sigma." Write a paragraph or two about what you learned and how it connects to variability in general and to standard deviation and the normal curve in particular.

2. Many social issues involve data and interpreting data. For example, income inequality (roughly speaking, the gap in income between people toward the top of the income scale and people toward the bottom) has increased in the past few decades. A good place to find data is on the Web site of the Census Bureau (www.census.gov). Click on "Income" and look for the latest report on income in the United States. Select a few facts from this detailed collection of income data to describe the extent of income inequality. Write a few paragraphs based on these facts.

3. Let's produce some data and describe them to gain insight into chance behavior. The mathematics of chance is the topic of Chapter 8, but for now, we will concentrate on data rather than math. You need two things: a standard six-sided die and a thumbtack with a rounded back (like a satellite dish). Toss the thumbtack 100 times (to speed things up, you could do 10 tosses of 10 tacks each) and record each outcome (pointing straight up or angled down). Also, toss the die 180 times and record each outcome (1, 2, 3, 4, 5, or 6). Use graphs and numbers to describe each set of results. Is the die roughly balanced, so that all six outcomes come up about equally? What about the thumbtack: Is "point up" or "point down" noticeably more common?