Mgmt 230: Introductory Statistics
Quiz: Describing Data

The Excel file `cars.xls` shows measures of nitrogen oxide (NO2) levels near a major highway and the number of automobiles that use the road on a given day, measured at Alnabru in Oslo, Norway, between October 2001 and August 2003.

1. Compute the mean and standard deviation for the level of NO2.

2. Compute the mean and standard deviation for the number of cars traveling on the highway.

3. On one of the days (the 63rd observation), the number of cars that were traveling on the road was 2,050 and the NO2 level was 166.1.

   (a) How many standard deviations above the mean is the number of cars?

   (b) How many standard deviations above the mean is the level of NO2?

   (c) If NO2 levels are normally distributed, and you assume that the number of cars and NO2 level are independent, what is the probability of having a NO2 measure larger than 166.1?