Homework #1

- 8 problems are graded. (1.2, 2.2, 2.7, 2.14, 2.15, 2.32, 2.39, 2.44)

- Each problem is 5 points.

- Solutions to problem 1.2 and problem 2.21
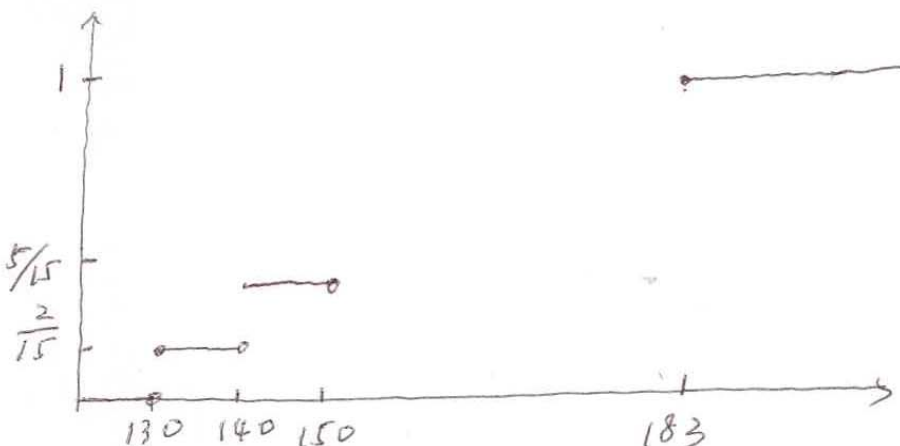
1.2   (instructor's solutions manual)

The statistical population is the collection of singer preferences of students' at your school. The sample consists of the singers named by each person who calls the station.

This sample is not representative of all students' preferences. Those who listen to a particular station or program are a special subgroup with similar listening tastes. A better approach would be to use a random number table to select persons from your college directory. Use 3 digits for the page number, 2 digits for the column(if two columns of names) and 3 digits for the position in the column. Those selected can be contacted by phone.

2.21 $F(x) = \dfrac{\text{\# of the obs. that is less or equal to } x}{n}$ $(n = 15)$

then.

$$F(x) = \begin{cases} 0 & x < 130 \\ \frac{2}{15} & 130 \leq x < 140 \\ \frac{5}{15} & 140 \leq x \leq 150 \\ \vdots & \vdots \\ \frac{14}{15} & 170 \leq x < 183 \\ 1 & 183 < x < 190 \end{cases}$$

or

$$F(x) = \begin{cases} 0 & x < 132 \\ \frac{1}{15} & 132 \leq x < 136 \\ \frac{2}{15} & 136 \leq x < 141 \\ \vdots & \vdots \\ \frac{14}{15} & 175 \leq x < 183 \\ 1 & 183 \leq x \end{cases}$$