

Solutions to Selected even Numbered Problems Till Now

Problem 1.14

{a}. These are Ratio data.

{b}. These are Nominal data.

{c}. These are ordinal data.

Problem 2.36

The respective class frequencies are 1,2,15,16,4 and 2.

Problem 2.38

The cumulative frequencies less than 13, less than 15, less than 17, less than 19, less than 21, less than 23, less than 23, less than 25 are respectively 0, 1, 3, 18, 34, 38 and 40.

Problem 2.58

Use the Histogram from **Problem 2.48** to do this Problem. In this Problem you have to Redraw the histogram by combining the second and third classes which will be 2.0-5.9 and the frequency corresponding to this will be $18+12=30$.

Problem 3.12

No **Danger** of the elevator being overloaded.

Problem 3.34

{a}. Since the sample means are 30.4, 30.24 and 29.6 the manufacturers of car A can use the mean to substantiate the claim that their car performed best.

{b}. Since the sample medians are 30.6, 31.2 and 29.1 the manufacturers of car B can use the mean to substantiate the claim that their car performed best.

Problem 3.42

$Q_1 = 411, Q_2 = 417$ and $Q_3 = 432$. **Problem 3.46** The median is 118.5, Q_1 is 109 and Q_3 is 126.5.

Problem 3.58

O is the mode. Inspection of the data shows that the frequencies go down and then back up, which is not conveyed by merely stating that the mode is 0.

Problem 4.6

The interquartile is 2 and which is much smaller than the range 8. This

should not come as a surprise since the middle 50 percent of the data are concentrated close to mean.