

Chapter 4-Measures of Central Tendency

4.1 Mode = 72; Median = 72, Mean = 70.18

4.3 Even without reading the passage, students are still getting about twice as many items correct as they would by chance. This suggests that the test, while testing reading comprehension, is also testing something else.

4.5 The mean falls above the median.

4.7 Rats running a straight alley maze:

$$\Sigma X = 320; \bar{X} = \frac{\Sigma X}{N} = \frac{320}{15} = 21.33$$

Median = 21

4.9 Multiplying by a constant (5):

Original data 8 3 5 5 6 2 Mean = 4.833, Mode = 5, Median = 5

Revised data 40 15 25 25 30 10 Mean = 24.17 = 5×4.833, Mode = 25,
Median = 25

4.11 Measures of central tendency for ADDSC and GPA:

ADDSC

Mode = 50

Median = 50

Mean = 4629/88 = 52.6

GPA

Mode = 3.00

Median = 2.635

Mean = 216.15/88 = 2.46

4.13 The only measure that is acceptable for nominal data is the mode, because the mode is the only one that does not depend on the relationships among the points on the scale.

4.15 The measures of central tendency in Exercise 4.14 suggest that we process information sequentially, at least within the domain of Sternberg's experimental design.

4.17 Class attendance:

Regular Attendees Mean = 276.42; Median = 276

Poor Attendees Mean = 248.33; Median = 256

The two groups were 20 points apart in terms of the medians, and about 25 points apart in terms of means. Clearly, those students who come to class do better.

4.19 This is an Internet activity in which there is no fixed answer.

4.21 Trimmed means

a) mean = 46.57; 10% trimmed mean = 46.67.

b) mean = 28.4; 10% trimmed mean = 25.0

c) Trimming was more effective in the second example because the second distribution was quite positively skewed.

4.23 The Male Optimists had a mean of 1.016, while the Male Pessimists had a mean of 0.945. This difference is very reliable.