

Calculating the Mean, Median, Mode, Midrange: show formulas and all work

Read Section 3-2, Measures of Center, then do the following problems. Do NOT use the pre-programmed calculator functions to do these problems.

1. Calculate the mean, median, mode, and midrange for the following sample data. $x: 2, 3, 7$
2. Calculate the mean, median, mode, and midrange for the following sample data. $x: 3, 5, 6, 10$
3. Calculate the mean, median, mode, and midrange for the following sample data. $x: 5, 1, 2, 13, 9$
4. Calculate the mean, median, mode, and midrange for the following sample data. $x: 7, 2, 12, 15, 4, 2$
5. Do problem #9 on page 87 in Section 3-2. (Calculate the mean, median, mode, and midrange for the sample data given with the problem.)

Calculating the Standard Deviation, Variance, Range: show formulas and all work

Read Section 3-3, Measures of Variation, then do the following problems. Do NOT use the

pre-programmed calculator functions for doing these problems. Use the formula $s = \sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$ for sample

data and $\sigma = \sqrt{\frac{\sum (x - \mu)^2}{N}}$ for population data.

6. Calculate the standard deviation, variance, and range for the following sample data. $x: 2, 3, 7$
Calculate the standard deviation again for this data set and this time assume the data is for a population.
7. Calculate the standard deviation, variance, and range for the following sample data. $x: 3, 5, 6, 10$
Calculate the standard deviation again for this data set and this time assume the data is for a population.
8. Calculate the standard deviation, variance, and range for the following sample data. $x: 5, 1, 2, 13, 9$
9. Calculate the standard deviation, variance, and range for the following sample data. $x: 7, 2, 12, 15, 4, 2$
10. Do problem #9 on page 105 in Section 3-3. Calculate the standard deviation, variance, and range for the sample data given with the problem. What makes this problem difficult?

Calculating Z-Scores: show formulas and all work

Read Section 3-4, Measures of Relative Standing, then do the following problems.

11. Do problem #5 on page 117.
12. Do problem #7 on page 117.
13. Do problem #9 on page 117.
14. Do problem #11 on page 117.
15. Men have a mean height of 69.0 inches with a standard deviation of 2.8 inches. Women have a mean height of 63.6 inches with a standard deviation of 2.5 inches. Obtain the heights of at least 5 members of your immediate family (grandfathers, grandmothers, father, mother, brothers, sisters, children over 21). Write their heights down and calculate their z-score (men using men's mean and standard deviation and women using women's mean and standard deviation). Make a note of any of your immediate blood relatives that have an "unusual z-score." Calculate your own z-score for height. Is your height "unusual?" Make a copy of this so we can briefly discuss it in class next week.