

Stat 171 - Worksheet for Section 2.4

Name: _____

1. A corporation hires 4 graduates. The starting salaries for each graduate are shown, in thousands of dollars. Find the range of the starting salaries for the Corporation.

40, 23, 52, 58

- (a) Identify the minimum and the maximum salaries.
- (b) Find the range.
- (c) Compare your answer with that for the Example given.

2. Find the population variance and standard deviation of the starting salaries for the corporation in Problem 1.

Salary x	Deviation $x - \mu$	Squares $(x - \mu)^2$

3. In a study of high school football players that suffered concussions, researchers places the players in two groups. Players that recovered from their concussions in 14 days or less were placed in group 1. Those that took more than 14 days were placed in group 2. The recovery times (in days) for group 2 are listed below. Find the sample variance and standard deviation of the recovery times.

18, 45, 47, 49, 24

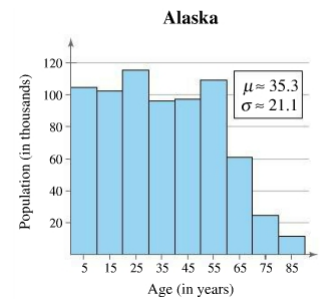
Time x	Deviation $x - \bar{x}$	Squares $(x - \bar{x})^2$

4. Write a data set that has 10 entries, a mean of 10, and a population standard deviation that is approximately 3.

5. In a survey conducted by the National Center for Health Statistics, the sample mean height of women in the United States (ages 20-29) was 64.2 inches, with a sample standard deviation of 2.9 inches. Estimate the percent of women whose heights are between 64.2 inches and 67.1 inches.

- (a) How many standard deviations is 67.1 to the right of 64.2?
- (b) Use the Empirical Rule to estimate the percent of the data between 64.1 and 67.1.
- (c) Interpret the results in the context of the data.

6. The age distributions for Alaska is shown in the histogram. Apply Chebychev's Theorem to the data using $k = 2$.



7. Find the sample mean and the sample standard deviation of the data set from Problem 1 of Worksheet 2.1.

8. Find the coefficient of variation for the data in problem 1.