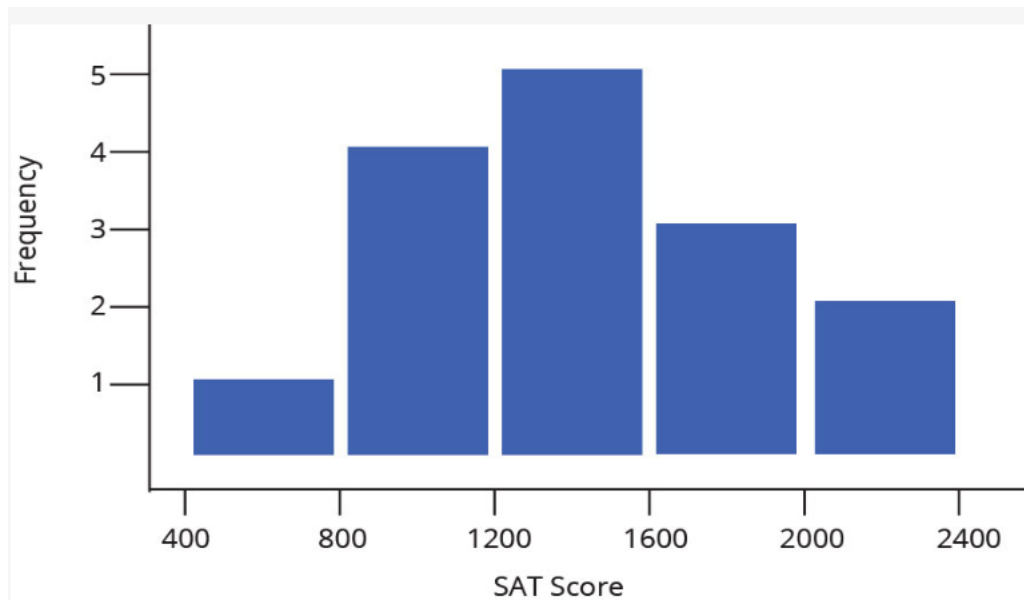


Practice problems

Open problems. Show your work. Round final answers to two decimal places and include units in all final answers

Problem 1

The following histogram displays the SAT scores of 15 students. The first bar represents scores greater than or equal to 400 and less than 800 points. Use this histogram to answer the questions that follow.



a. What percent of the students scored over 1200 on the SAT?

b. What are the possible values of the M , Q_1 , Q_3 ?

Problem 2

A manufacturer of jeans has plants in California, Arizona, and Texas. A group of 14 pairs of jeans is randomly selected from the computerized database, and the state in which each is produced is recorded:

CA	AZ	AZ	TX	CA	CA	TX
CA	TX	CA	TX	AZ	TX	CA

Construct a bar graph to describe the data.

Problem 3

The ages of the five randomly selected justices of the U.S. Supreme Court are as follows:

83, 72, 69, 70, and 76 years.

Calculate the mean and standard deviation of these data.

Problem 4

Healing of skin wounds. Biologists studying the healing of skin wounds measured the rate at which new cells closed a razor cut made in the skin of an anesthetized newt. Here are data from 10 newts, measured in micrometers (millionths of a meter) per hour:

29	27	50	22	14
35	26	12	30	31

a. Give the five-number summary for these data.

b. Calculate the IQR (interquartile range).

Is the IQR a measure of spread or of center?

Is the IQR a resistant measure or not? Why?

c. Make a boxplot of the healing rates.

Problem 5

Scores on the Wechsler Adult Intelligence Scale (WAIS) are approximately Normal with mean 102.8 points and standard deviation 11.3 points.

a) Use the 68-95-99.7 rule for part a to complete the following sentence and support your answer.

Only 2.5 % of scores were greater than _____ points.

Middle 99.7 % of scores were between _____ points.

b) What percent of adults had scores greater than 109 points?

c) What percent of adults had scores between 83 and 109 points?

d) Complete the following sentence.

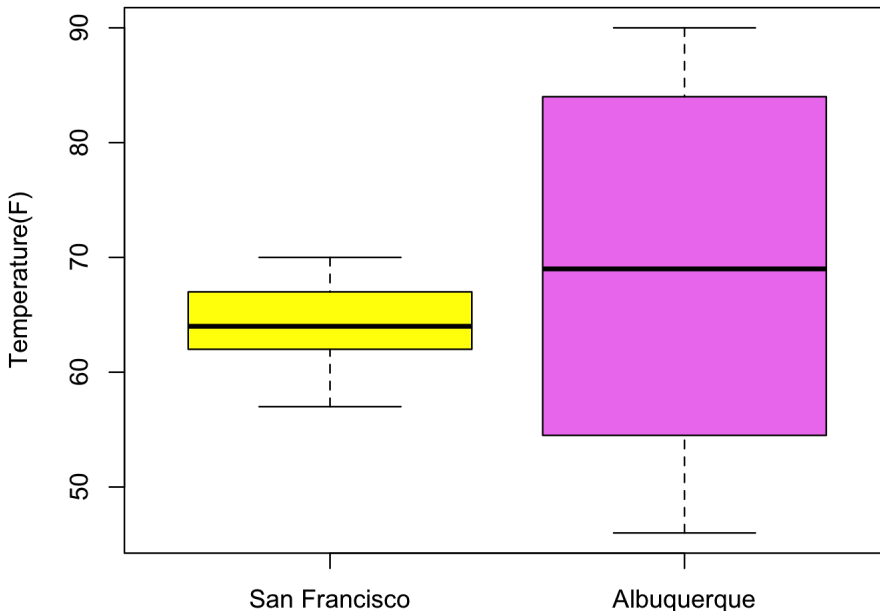
Only 3.86% of adults had scores of _____ or more points.

Multiple Choice

Use the following boxplots to answer Questions 1, 2, and 3.

These boxplots compare the average high temperatures of San Francisco to those in Albuquerque during one year.

Average high temperature: San Francisco vs. Albuquerque



1. Based on the boxplot for temperatures of San Francisco, which of the following statements is true?
 - a) Half of temperatures are below 70 F
 - b) The IQR is 15 F
 - c) About 10% of temperatures are below 65 F
 - d) A quarter of temperatures are above 67 F
2. Which of the following statements is true:
 - a) The spread of temperatures of San Francisco is greater than the spread of temperatures of Albuquerque
 - b) The first quartile of temperatures of San Francisco is less than the third quartile of temperatures of Albuquerque
 - c) The median of temperatures of San Francisco is greater than the median of temperatures of Albuquerque
 - d) The third quartile of temperatures of San Francisco is less than the first quartile of temperatures of Albuquerque
3. Based on the boxplot for temperatures of Albuquerque, which of the following statements is true?
 - a) Half of temperatures are below 69 F
 - b) Half of temperatures are above 55 F
 - c) A quarter of temperatures are above 55 F
 - d) A quarter of temperatures are below 69 F