

SECTION EXERCISES

SECTION 1

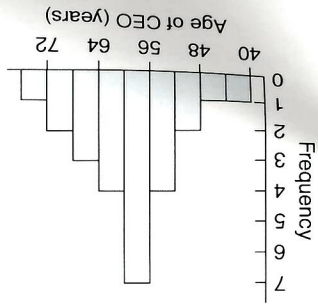
1 Earnings A sociologist says, "Typically, men in the United States still earn more than women." What does this statement mean? (Pick the best choice.)

- a. All men make more than all women in the United States.
- b. All U.S. women's salaries are less varied than all men's salaries.
- c. The center of the distribution of salaries for U.S. men is greater than the center for women.
- d. The highest paid people in the United States are men.

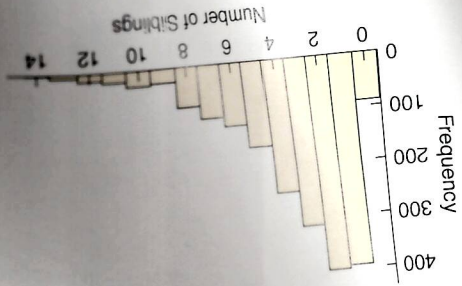
2 Houses A real estate agent claims that all things being equal, houses with swimming pools tend to sell for less than those without swimming pools. What does this statement mean? (Pick the best choice.)

- a. There are fewer homes with swimming pools than without.
- b. The typical price for homes with pools is smaller than the typical price for homes without pools.
- c. There's more variability in the price of homes with pools than in the price of those without.
- d. The most expensive houses sold do not have pools.

3 Age of CEOs (Example 1) The histogram shows the ages of 25 CEOs listed at Forbes.com. Based on the distribution, what is the approximate mean age of the CEOs in this data set? Write a sentence in context (using words in the question) interpreting the estimated mean. The typical CEO is about _____ years old.



4 Siblings The histogram shows the number of siblings (brothers and sisters) for 2000 adults surveyed for the 2008 General Social Survey. Based on the distribution, what is the approximate mean number of siblings for these 2000 people? Write a sentence in context interpreting the estimated mean. You may want to refer to the model in Exercise 3. (Source: www.norc.uchicago.edu)



5 Paid Days (Example 2) This list represents the numbers of paid vacation days required by law for different countries. (Source: *2009 World Almanac and Book of Facts*)

United States	0
Australia	20
Italy	20
France	30
Germany	24
Canada	10

- a. Find the mean, rounding to the nearest tenth of a day. Interpret the mean in this context.
- b. Find the standard deviation, rounding to the nearest tenth of a day. Interpret the standard deviation in context.
- c. Which number of days is farthest from the mean and therefore contributes most to the standard deviation?

6 Children of First Ladies This list represents the number of children for the first six First Ladies of the United States. (Source: *2009 World Almanac and Book of Facts*)

Martha Washington	0
Abigail Adams	5
Martha Jefferson	6
Dolley Madison	0
Elizabeth Monroe	2
Louisa Adams	4

- a. Find the mean number of children, rounding to the nearest tenth. Interpret the mean in this context.
- b. According to *enr/encyclopedia*, women living around 1800 tended to have between 7 and 8 children. How does the mean of these first ladies compare to that?
- c. Which of the first ladies listed here had the number of children that is farthest from the mean and therefore contributes most to the standard deviation?
- d. Find the standard deviation, rounding to the nearest tenth.

7 Ages of Presidents at Inauguration At their inauguration, the ages of the first six presidents of the United States were 57, 61, 57, 57, 58, and 57. (Source: *2009 World Almanac and Book of Facts*)

- a. Find the mean age at inauguration, rounding to the nearest tenth. The mean of the most recent six presidents (Carter to Obama) was 55.3. Did the first six presidents tend to be a bit older or a bit younger than the most recent six presidents were?
- b. Find the standard deviation of the ages at inauguration, rounding to the nearest tenth. The standard deviation of the most recent six presidents was 9.3 years. Did the first six tend to have more or less variation than the most recent presidents did?