

Statistical Measures Part One

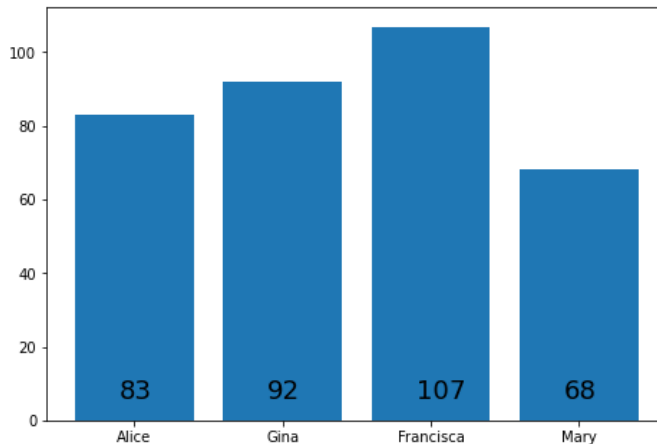
Multiple Choice

1. What is the median of the following set of numbers?

1, 5, 5, 14, 22, 34, 63, 80

- A) 5
- B) 14
- C) 18
- D) 28

2. Alice, Gina, Francisca, and Mary ran a race. The bar graph below gives each girl's running time, in seconds. How many of the girls ran the race in less time than the average of the 4 running times?



- A) 0
 - B) 1
 - C) 2
 - D) 3
3. A retail sales associate's daily commission during 1 week was \$40 on Monday and Tuesday and \$60 on Wednesday, Thursday, and Friday. What was the associate's average daily commission for these 5 days?
- A) \$50
 - B) \$52
 - C) \$54
 - D) \$56

4. Harriet took 7 quizzes in French class. Her scores, in order, were 5, 5, 4, 5, 8, 9 and 8. She discovered a scoring error on the 7th quiz, and her score on that quiz was corrected to 9. Which of the following measures of central tendency changed as a result of the correction?
- I. Mean
II. Median
III. Mode
- A) I only
B) II only
C) II and III only
D) I, II, and III
5. A large theater complex surveyed 9,000 adults. The results of the survey are shown in the tables below.

Age Groups	Number
21 – 30	3250
31 – 40	2550
41 – 50	1750
51 or older	1450

Movigoer Category	Number
Very often	1870
Often	2730
Sometimes	3950
Rarely	450

Based on the survey results, what was the average number of movigoers for the “Very often”, “Often”, and “Sometimes” categories?

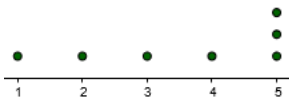
- A) 2000
B) 2250
C) 2500
D) 2850

6. The mean age of the 6 people in a room is 32 years. One of the 6 people, whose age is 44 years, leaves the room. What is the mean age of the 5 people remaining in the room?
- A) 24.7
B) 29.6
C) 30.0
D) 31.5
7. A new band asked its audience to rate the band's performance on a scale of 1 (poor) through 5 (excellent). The table below gives the percentage of the audience that gave each of the ratings. To the nearest tenth, what was the mean rating given by this audience?

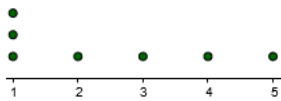
Rating	Percentage
1	0%
2	5%
3	15%
4	50%
5	30%

- A) 3.7
B) 3.8
C) 3.9
D) 4.1
8. For which of the following sets of 7 data points is the median greater than the mean?

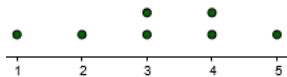
A)



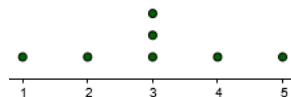
B)



C)



D)

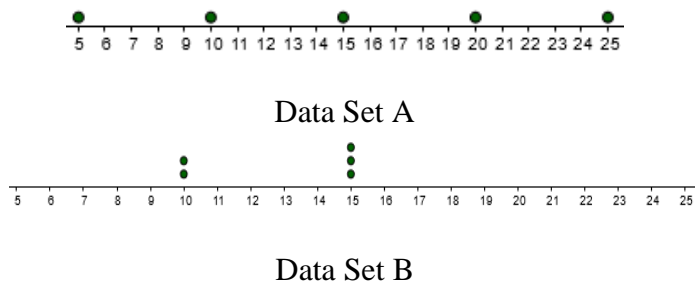


9. For a certain location in Fairbanks, Alaska, the highest temperature on record is 99°F and the lowest temperature on record is -66°F . Which of the following statements below is necessarily true about the temperatures on record for this location?

- I. The mode temperature is 16.5°F .
- II. The median temperature is 16.5°F .
- III. The range of temperatures is 165°F .

- A) I only
- B) II only
- C) III only
- D) II and III only

10.



Which of the given data sets has a smaller standard deviation?

- A) Data set A
- B) Data set B
- C) The standard deviations of data set A and data set B are equal.
- D) There is not enough information to determine which set has a smaller standard deviation.

Grid-In

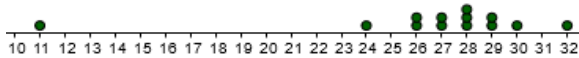
11. The scores given below were earned by 10 students on a recent chemistry test. What is the median score?

73, 84, 92, 71, 98, 84, 91, 90, 88, 81

12. The table below shows the number of cars Joan sold each month last year. What is the median number of cars sold?

Month	Number of cars sold
January	29
February	19
March	23
April	31
May	17
June	24
July	12
August	22
September	26
October	28
November	32
December	31

- 13.



The dot plot above shows the ages, in years, of all 13 people in a room. When one person leaves the room, the mean age of the remaining people becomes greater than the mean weight of the initial 13 people in the room. Of the ages of people in the dot plot above, what is a possible age, in years, for the person that left the room?

14.

Month	Precipitation (Inches)
January	9
February	4
March	3
April	2
May	3
June	1
July	0
August	0
September	1
October	3
November	4
December	6

The table above gives the amount of precipitation recorded in Seattle in 2020 for each of the 12 months. What is the mean amount of precipitation, in inches?

15. A student wishes to study the heights of her classmates in math class. A table of the heights is shown below.

Student	Height
Cassandra	5 ft 7 inches
James	5 ft 11 inches
Abigail	5 ft 3 inches
Moir	5 ft 10 inches
Brendan	5 ft 6 inches
Tyra	5 ft 7 inches
Kendra	5 ft 2 inches
Paul	6 ft 1 inch
Morgan	6 ft 2 inches
Kristina	5 ft 1 inch
Sebastian	5 ft 4 inches
Antonio	5 ft 9 inches

What is the range of heights, in inches, in the class?