

SAT Math

Distributions 2

Question # ID

2.1 4c774b00

Ages of 20 Students Enrolled in a College Class

Age	Frequency
18	6
19	5
20	4
21	2
22	1
23	1
30	1

The table above shows the distribution of ages of the 20 students enrolled in a college class. Which of the following gives the correct order of the mean, median, and mode of the ages?

- A. mode < median < mean
- B. mode < mean < median
- C. median < mode < mean
- D. mean < mode < median

2.2 3f2ee20a

The results of two independent surveys are shown in the table below.

Men's Height

Group	Sample size	Mean (centimeters)	Standard deviation (centimeters)
A	2,500	186	12.5
B	2,500	186	19.1

Which statement is true based on the table?

- A. The Group A data set was identical to the Group B data set.
- B. Group B contained the tallest participant.
- C. The heights of the men in Group B had a larger spread than the heights of the men in Group A.
- D. The median height of Group B is larger than the median height of Group A.

2.3 d0efc1dd

15, 14, 18, 17, x

The mean and the median of the five numbers above are equal. Which of the following is NOT a possible value of x ?

- A. 6
- B. 11
- C. 16
- D. 21

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Question # ID
2.4 07f2829b

International Tourist
Arrivals, in millions

Country	2012	2013
France	83.0	84.7
United States	66.7	69.8
Spain	57.5	60.7
China	57.7	55.7
Italy	46.4	47.7
Turkey	35.7	37.8
Germany	30.4	31.5
United Kingdom	26.3	32.2
Russia	24.7	28.4

The table above shows the number of international tourist arrivals, rounded to the nearest tenth of a million, to the top nine tourist destinations in both 2012 and 2013. Based on the information given in the table, how much greater, in millions, was the median number of international tourist arrivals to the top nine tourist destinations in 2013 than the median number in 2012, to the nearest tenth of a million?

2.5 7b65bb28

Station 1	Station 2	Station 3	Station 4	Station 5
\$3.699	\$3.609	\$3.729	\$3.679	\$3.729

In the table above, Melissa recorded the price of one gallon of regular gas from five different local gas stations on the same day. What is the median of the gas prices Melissa recorded?

- A. \$3.679
- B. \$3.689
- C. \$3.699
- D. \$3.729

2.6 be00d896

For which of the following data sets is the mean greater than the median?

- A. 5, 5, 5, 5, 5, 5, 5, 5
- B. 0, 10, 20, 30, 40, 50, 60, 70, 80
- C. 2, 4, 8, 16, 32, 64, 128, 256, 512
- D. 7, 107, 107, 207, 207, 207, 307, 307, 307

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2.7 5c3c2e3c

The weights, in pounds, for 15 horses in a stable were reported, and the mean, median, range, and standard deviation for the data were found. The horse with the lowest reported weight was found to actually weigh 10 pounds less than its reported weight. What value remains unchanged if the four values are reported using the corrected weight?

- A. Mean
- B. Median
- C. Range
- D. Standard deviation

2.8 9110c120

Data set A: 5, 5, 5, 5, 5, 5, 5, 5
Data set B: 5, 5, 5, 5, 5, 5, 5, 5, 100

Which of the following statements about the means and medians of data set A and data set B is true?

- A. Only the means are different.
- B. Only the medians are different.
- C. Both the means and the medians are different.
- D. Neither the means nor the medians are different.

2.9 881ef5f5

If a is the mean and b is the median of nine consecutive integers, what is the value of $|a - b|$?

2.10 9e2bf782

A fish hatchery has three tanks for holding fish before they are introduced into the wild. Ten fish weighing less than 5 ounces are placed in tank A. Eleven fish weighing at least 5 ounces but no more than 13 ounces are placed in tank B. Twelve fish weighing more than 13 ounces are placed in tank C. Which of the following could be the median of the weights, in ounces, of these 33 fish?

- A. 4.5
- B. 8
- C. 13.5
- D. 15

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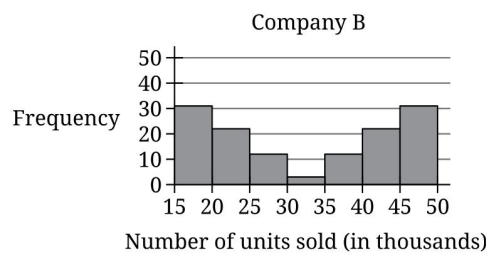
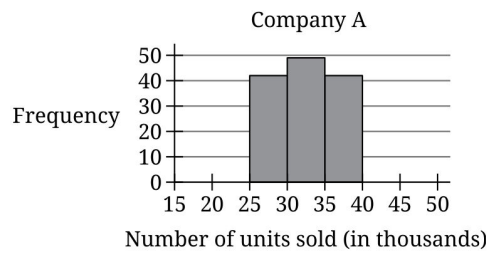
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Question # ID
2.11 8193e8cd

2, 10, 3, 7, 6

The mean of the list of numbers above is what fraction of the sum of the five numbers?

2.12 25fc031a



The histograms summarize the distributions of number of units sold, in thousands, for company A and company B. Which statement best compares the standard deviations of number of units sold for these companies?

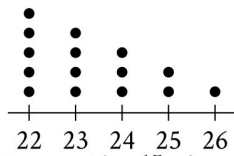
- A. The standard deviation of number of units sold for company A is less than the standard deviation of number of units sold for company B.
- B. The standard deviation of number of units sold for company A is greater than the standard deviation of number of units sold for company B.
- C. The standard deviation of number of units sold for company A is equal to the standard deviation of number of units sold for company B.
- D. There is not enough information to compare the standard deviations.

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2.13 578e26ae

Data Set A



Data set A has 15 values and is represented by the dot plot shown. Data set B is created by adding 46 to each of the values in data set A. Which of the following correctly compares the medians and the ranges of data sets A and B?

- A. The median of data set B is greater than the median of data set A, and the range of data set B is equal to the range of data set A.
- B. The median of data set B is greater than the median of data set A, and the range of data set B is greater than the range of data set A.
- C. The median of data set B is equal to the median of data set A, and the range of data set B is greater than the range of data set A.
- D. The median of data set B is equal to the median of data set A, and the range of data set B is equal to the range of data set A.