A random sample of 20 marks from an IA scores in STAT 111 is listed as: 25, 26, 13, 23, 23, 25, 17, 22, 17, 19, 12, 26, 30, 30, 18, 14, 12, 26, 17, 18. The mean and the standard deviation are 20.65 and 5.71 respectively. The lecturer decided to add 5 marks to each student's mark. Calculate the sample mean and sample standard deviation of the new marks.

- ○ A. 25.65 , 32.66
- ◉ B. 25.65 , 5.71
- ○ C. 25.65 , 25.79
- ○ D. 20.65 , 5.71
- ○ E. 20.50 , 5.71

Reset Selection

A random sample of 20 marks from an IA scores in STAT 111 is listed below. Calculate the sample mean and sample standard deviation 29, 26, 13, 23, 23, 25, 17, 22, 17, 19, 12, 26, 30, 30, 18, 14, 12, 26, 17, 18

- ○ A. 20.85 , 35.29
- ○ B. 20.55 , 35.29
- ○ C. 20.50 , 5.94
- ○ D. 20.50 , 6.02
- ◉ E. 20.85 , 5.94

Reset Selection

A random sample of 20 marks from an IA scores in STAT 111 is listed as: 25, 26, 13, 23, 23, 25, 17, 22, 17, 19, 12, 26, 30, 30, 18, 14, 12, 26, 17, 18. The mean and the standard deviation are 20.65 and 5.71 respectively. The lecturer decided to double each student's score. Calculate the sample mean and sample standard deviation of the new scores.

- ○ A. 20.65 , 5.71
- ○ B. 41.30 , 5.71
- ◉ C. 41.30, 11.42
- ○ D. 20.65 , 11.42
- ○ E. Cannot be determined

Reset Selection

The distribution of weights of female students in the Department of Statistics aged 18 to 24 is approximately normally distributed with a mean of 65.5kg and standard deviation of 2.5kg. Calculate the z-score for a student whose weight is 72kg.

- ○ A. 1.04
- ○ B. -2.60
- ○ C. -1.04
- ○ D. 2.4
- ◉ E. 2.60

Reset Selection

Ten numbers

$$x_1, x_2, \ldots, x_{10}$$

have a mean of 10 and a sample standard deviation of 3. Find the value of

$$\sum_{i=1}^{10} (x_1 - 10)^2.$$

- A. 9
- B. 81
- C. Cannot be determined
- D. 144
- E. 30

Reset Selection

A sample of scores,

$x_1, x_2, \ldots, x_n$

have a sample standard deviation of 6 and a the sum of squared deviation,

$$\sum_{i=1}^{n}(x_1 - \bar{x})^2 = 396.$$

Find the sample size,

n.

- (●) A. 12
- ( ) B. 9
- ( ) C. 11
- ( ) D. 10
- ( ) E. 13

Which of the following would best describe a dataset that is symmetric

○ A. The standard deviation is half the mean.

○ B. The mean is much smaller than the median.

○ C. The range is larger than the interquartile range.

◉ D. There measures of cental tendencies are equal.

○ E. The range is equal to 5 standard deviations.

Reset Selection

The temperature reading on a water heater can be characterised under the level of measurement

- ○ A. categorial
- ○ B. ordinal
- ○ C. ratio
- ○ D. nominal
- ◉ E. interval

Reset Selection

The following statistics are used in constructing a box and whisker plot except

- (●) A. mean.
- ( ) B. percentiles.
- ( ) C. deciles.
- ( ) D. quartiles
- ( ) E. the maximum and the minimum

Reset Selection

The following are levels of measurement for data except

- ○ A. nominal
- ○ B. ordinal
- ○ C. interval
- ○ D. ratio
- ◉ E. categorial

Reset Selection

Which of the following would best describe a dataset that is symmetric

○ A. The standard deviation is half the mean.

○ B. The mean is much smaller than the median.

○ C. The range is larger than the interquartile range.

○ D. There measures of cental tendencies are equal.

○ E. The range is equal to 5 standard deviations.

Reset Selection

Arrange the order of sampling schemes from worst to best.

◉ A. convenience, simple random, stratified

○ B. stratified, convenience, simple random

○ C. stratified, simple random, convenience

○ D. simple random, convenience, stratified

○ E. simple random, stratified, convenience

Reset Selection

A numerical value used as a summary measure for a sample, such as sample mean, is known as a

◉ A. sample statistic.

○ B. None of the above answers is correct.

○ C. population parameter.

○ D. sample parameter.

○ E. population mean.

Reset Selection

The following are ages of people randomly selected at the UG Basic School: 10, 5, 6, 11, 7, 8, 6, 5, 49, 12. The measure of location which is the most likely to be influenced by age 49 in the data set is the

- ○ A. mode
- ○ B. range
- ◉ C. mean
- ○ D. standard deviation
- ○ E. median

Reset Selection

If a data set has an odd number of observations, the median

○ A. cannot be determined

○ B. is the average value of the two middle items

○ C. must be equal to the mean

○ D. is the average value of the two middle items when all items are arranged in ascending order

◉ E. None of the answers is correct.

Reset Selection

The relationship among the geometric mean (GM), arithmetic mean (AM) and harmonic mean (HM) is

○ A.

$$GM = AM + HM$$

◉ B.

$$(GM)^2 = AM \times HM$$

○ C.

$$(GM)^2 = AM + HM$$

○ D.

$$(AM)^2 = GM \times HM$$

○ E.

Which of the following is not a measure of dispersion?

- ○ A. the range
- ◉ B. the 5th decile
- ○ C. the standard deviation
- ○ D. the interquartile range
- ○ E. the variance

Reset Selection

The following are common to the level of measurements, interval and ratio scales of measurrement except

◉ A. Both have true zero point

○ B. Interval is a subset of Ratio scale data

○ C. Can be categorized into norminal scale

○ D. Both are quantitative

○ E. Can be categorized into ordinal scale

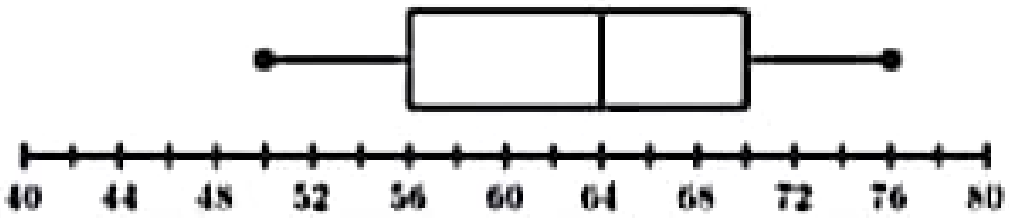
Reset Selection

An animal scientist wanted to compare the weights of guinea pigs and pigs that feeds on a particular feed from Accra Brewery Limited. The guinea pigs weigh a few kilograms whereas the pigs are in a tens to hundreds of kilograms. Which of the following would be more appropriate in comparison of the variation within the pigs and the guinea pigs

- ○ A. variance
- ○ B. inter-quartile range
- ○ C. range
- ◉ D. coefficient of variation
- ○ E. standard deviation

Reset Selection

The box-and-whisker plot displays the number of inches of snowfall on the the Devil's Peak mountain in Cape Town for the last year for 14 years. What are the range and inter-quartile range of snow that fell?



- ○ A. 14 and 17 inches
- ○ B. 14 and 16 inches
- ○ C. 17 and 14 inches
- ○ D. 8 and 17 inches
- ◉ E. 26 and 14 inches

Reset Selection

A statistics professor asked students in a class their ages. Based on this information, the professor states that the average age of all the students in the university is 21 years. This is an example of

○ A. a census

○ B. descriptive statistics

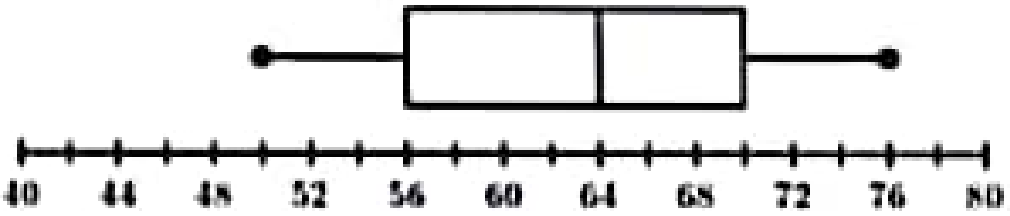
○ C. an experiment

◉ D. statistical inference

○ E. None of the above answers is correct

Reset Selection

The box-and-whisker plot displays the number of inches of snowfall on the the Devil's Peak mountain in Cape Town for the last year for 14 years. What are the first, second and third quartiles of snow that fell?



- ○ A. 49, 64 and 70 inches
- ○ B. 56, 64 and 76 inches
- ◉ C. 56, 64 and 70 inches
- ○ D. 56, 64 and 72 inches
- ○ E. 49, 64 and 72 inches

Reset Selection

In Statistics, the graphical and numerical methods used to describe, organize, and summarize data is known as:

- ○ A. Inferential statistics
- ◉ B. Descriptive statistics
- ○ C. Biostatistics
- ○ D. Data analysis
- ○ E. Sample statistics

Reset Selection