1. Find the median of the set of numbers: 1,2,3,4,5,6,7,8,9 and 10. * 1 point

- [ ] 55
- [ ] 10
- [ ] 1
- [x] 5.5

2. Find the mode from these test results: 90, 80, 77, 86, 90, 91, 77, 66, 69, 65, 43, 65, 75, 43, 90. * 1 point

- [ ] 43
- [ ] 77
- [ ] 65
- [x] 90

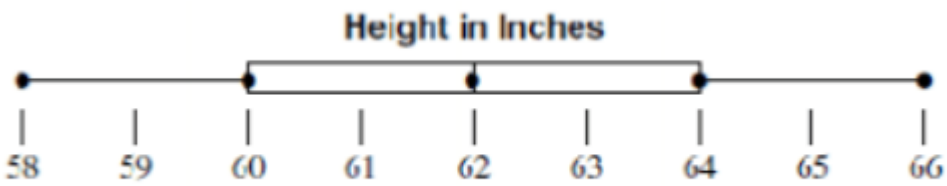
3. The following numbers represent the ages of people on a bus: 3, 6, 27, 13, 6, 8, 12, 20, 5, 10. Calculate the mean of their ages. * 1 point

- [x] 11
- [ ] 6
- [ ] 9
- [ ] 110

4. Calculate the interquartile range of the following data 17, 18, 18, 19, 20, 21, 21, 23, 25 * 2 points

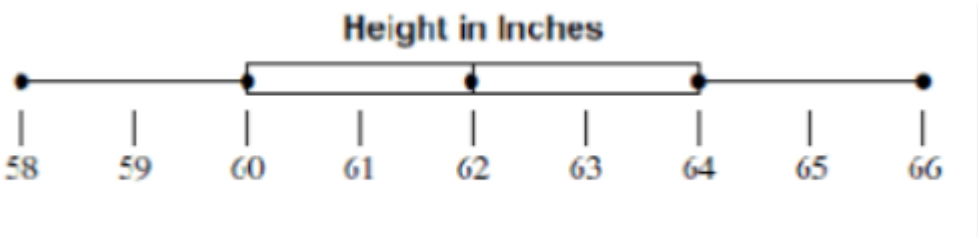
- (●) 3
- ( ) 4
- ( ) 5
- ( ) 8

5. What value is the lower quartile (Q1)? * 2 points



- ( ) 66
- ( ) 58
- (●) 60
- ( ) 64

6. What data value is the upper quartile (Q3)? * 2 points



- (●) 64
- ( ) 62
- ( ) 66
- ( ) 58

7. What is the variance for the data given : 5, 10, 7, 12, 0, 20, 15, 22, 8, 2 * 1 point

- (●) 47.49
- ( ) 102.01
- ( ) 52.77
- ( ) 81

8. If 10 is added to every value in a set of data, what will happen to the value of the standard deviation? * 2 points

- [ ] it will increase
- [ ] it will decrease
- [x] it will stay the same
- [ ] it will both increase and decrease

9. If mean=50, mode=40, and standard deviation=5, the distribution is: * 2 points

- [x] Positively skewed
- [ ] Negatively skewed
- [ ] Symmetrical
- [ ] Difficult to tell

10. The lower and upper quartiles of distribution are 80 and 120 respectively, while the median is 100. The shape of the distribution is: * 2 points

- [ ] Positively skewed
- [ ] Negatively skewed
- [x] Symmetrical
- [ ] Normal

11. The degree of peakedness or flatness of a unimodal distribution is called: * 2 points

- ○ Skewness
- ○ Symmetry
- ○ Dispersion
- ◉ Kurtosis

12. Standard deviation is always calculated from: * 2 points

- ◉ Mean
- ○ Median
- ○ Mode
- ○ Lower quartile

13. * 1 point

if we have 3 datasets in which dataset 1 has 10 observations, dataset 2 has 20 observations, and dataset 3 has 30 observations, what will be a true statement when the mean for all three datasets are equal.

- ○ Dataset 1 has the smallest variance
- ○ Dataset 3 has the maximum variance
- ○ All datasets have the same variance
- ◉ None the above

14. * 2 points

Which statistical measurement is affected by outliers the most?

- (●) Range
- ( ) mean
- ( ) mode
- ( ) median

15. * 2 points

Covariance indicates the strength of the linear relationship between variables

- ( ) True
- (●) False

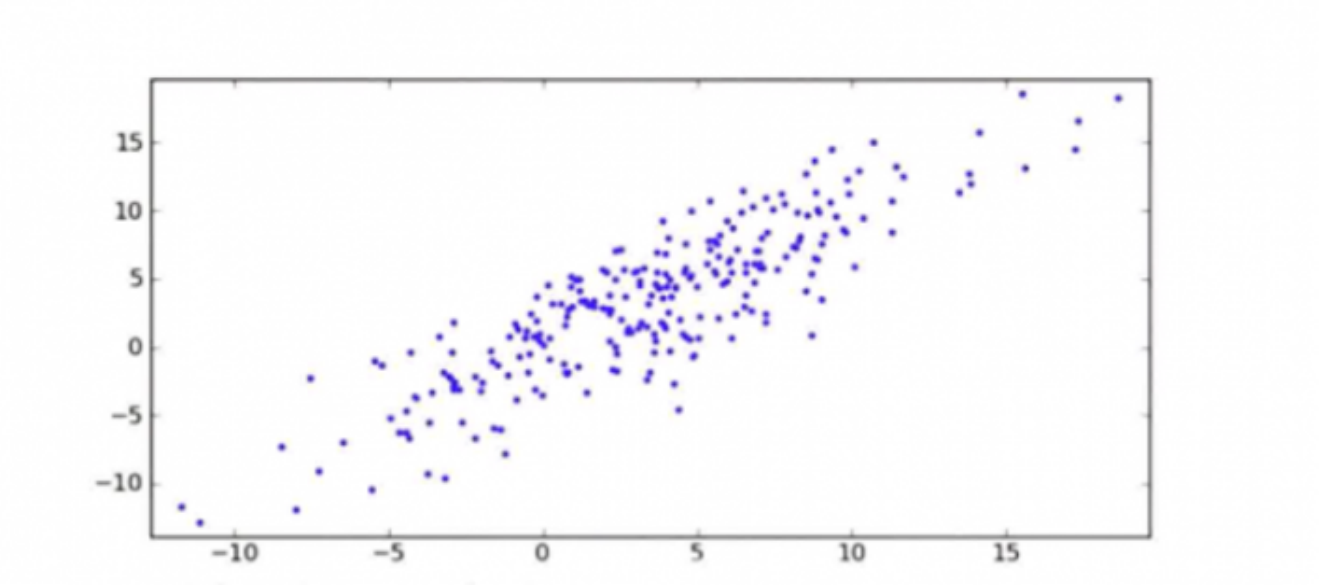
16. * 2 points

If you have a dataset with n observations and mean m. What will be the new mean if you add 5 to each data point?

- ( ) m
- (●) m+5
- ( ) 5
- ( ) None of the above

17. * 2 points

Is the below relationship Linear and Exact?



- ○ True
- ◉ False

18. * 1 point

For Pearson's correlation, if X increases Y increases, and when X decreases Y you don't know. Pearson's r should be close to which of the below values?

- ○ r=-1
- ◉ r=0
- ○ r=1
- ○ I can't know

19. * 2 points

IQ is distributed with a mean of 100 and a variance of 225. What is the standard score for IQ of 130.?

- (●) 2
- ( ) 0.13
- ( ) 30
- ( ) 15

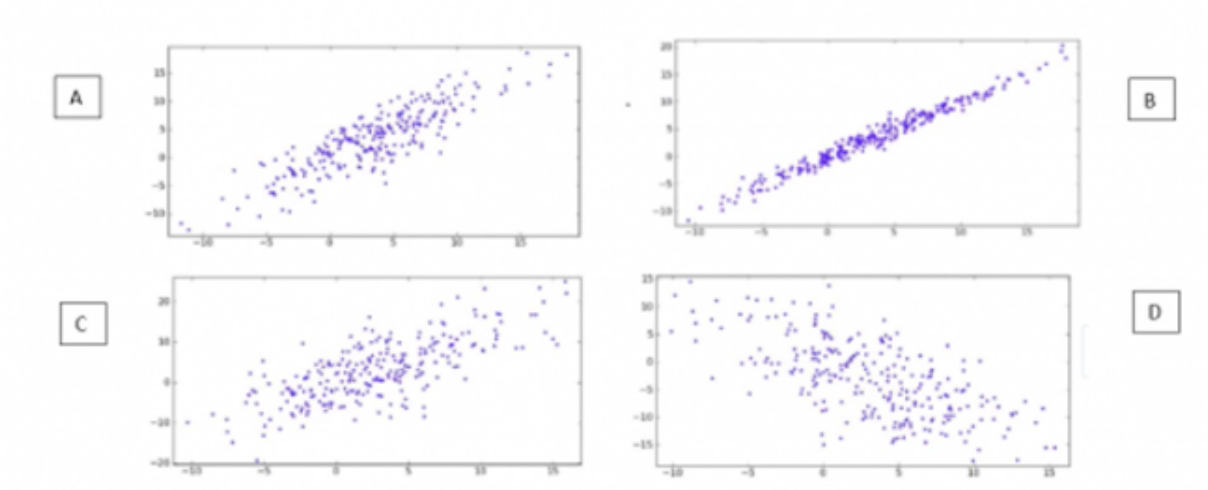
20. * 1 point

If the variance of a dataset is 50 and all data points are increased by 100% then what will be the variance?

- ( ) 50
- ( ) 100
- (●) 200
- ( ) 25

21. * 2 points

Rank the below correlation coefficient from lowest to highest coefficient.



- (●) B > A > C > D
- ( ) B > C > D > A
- ( ) B > C > A > D

22. * 1 point

Two sets of data consisting of 10 and 20 observations have the same mean eight with standard deviations of 1 and 2 respectively. If the two data sets are combined, then what is the variance?

- ○ 5
- ○ 2
- ◉ 3
- ○ 1

23. * 2 points

For any Normal Distribution, the mean is equal to the median equal to the Mode ALWAYS?

- ◉ True
- ○ False

24. The 2nd Quartile of a standard normal distribution is equal to? * 2 points

- [ ] 1
- [x] 0
- [ ] 2
- [ ] I can't tell