

Name:

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Section:

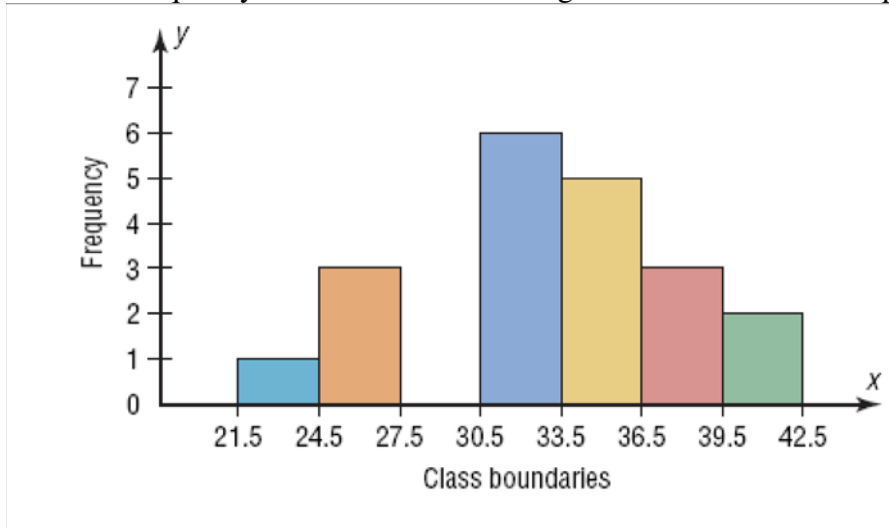
You have 30 questions. You have 90 minutes to finish the exam. Please mark all your answers on the answer sheet provided to you. Make sure that the answer sheet form matches the question form. You have to submit both question paper and answer sheet but **only answer sheets will be graded**. Good luck

Choose the **best answer** for each of the following questions:

1. What is the midpoint of the class 4-16?

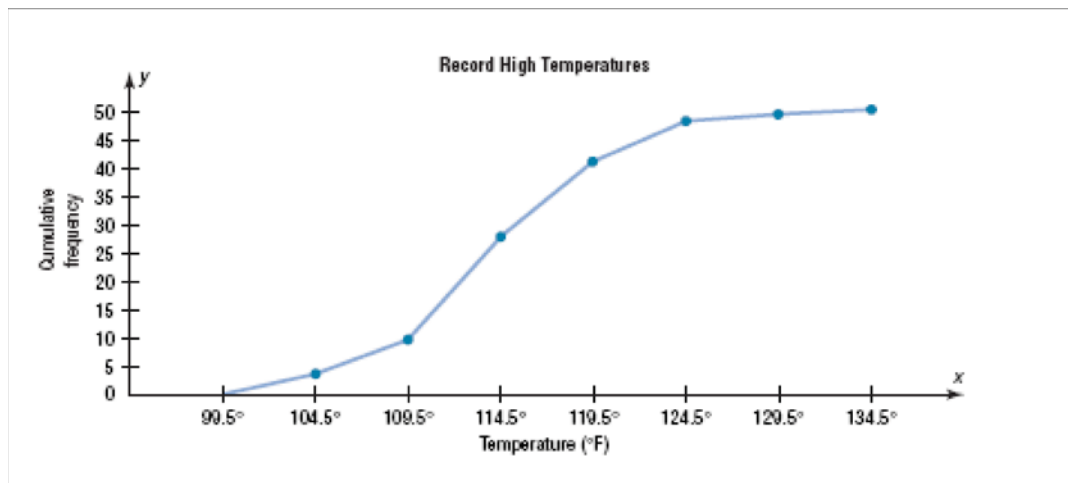
A) 6 B) 10 C) 4 D) 20

2. The total frequency of the data whose histogram is shown below is approximately:

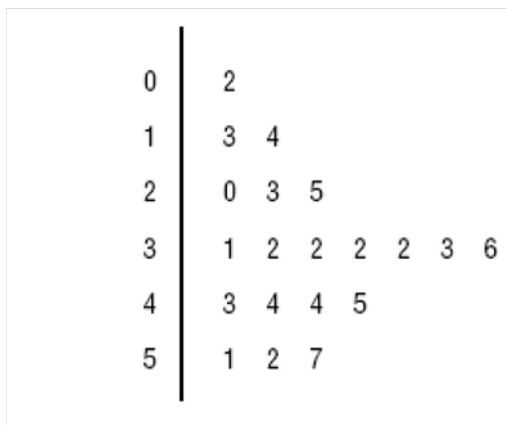


A) 6 B) 42 C) 7 D) 20

3. The ogive below represent the record high temperatures in F^0 for each of the 50 states, how many record high temperatures are less than 109.5?



- A) 50 B) 28 C) 104.5, 9.5 D) 10
4. Which one of the following is an example of a qualitative variable?
- A) Temperature B) Nationality C) Grade point average (GPA) D) Age
5. What are the class boundaries of the class 2.15- 3.93?
- A) 2.145- 3.940 C) 1.65- 4.43
 B) 2.145- 3.935 D) 2.10- 3.43
6. From the stem and leaf graph below, what is the mode for the data set?



- A) 32 B) 3 C) 23 D) 2

7. A university wants to represent the percentages of its students using a pie chart. The percentage of science faculty's students is 25%. Therefore, the degree of the angle of science faculty in the pie chart is
- A) 54° B) 180° C) 90° D) 36°
8. The stem part for the data value 325 is
- A) 5 B) 32 C) 35 D) 25
9. Using the class 20–38, what is the class width?
- A) 29 B) 38 C) 19 D) 18
10. "In 2013, the number of high school graduates students will be 3.2 million" .Which branch of statistics is used in above statement?
- A) Differential statistics C) Predictive statistics
B) Inferential statistics D) Descriptive statistics
11. The graphs that have their distributions as proportions instead of raw data as frequencies are called
- A) Ogive. C) histograms.
B) frequency polygons. D) relative frequency graphs.
12. An advertisement for an exercise product states: "Studies suggest that using our exercise machine will reduce your weight." This is an example of
- A) detached statistics C) ambiguous averages
B) implied connections D) changing the subject
13. A researcher divided subjects into two groups according to nationality (Saudi and non Saudi) and then she selected members from each group for her sample. What sampling method was the researcher using?
- A) Systematic B) Convenience C) Cluster D) Stratified
14. Which of the following represents a cluster sample?
- A) Every 100th hamburger manufactured is checked to determine its fat content.
B) Nursing supervisors are selected using random numbers in order to determine annual salaries.
C) In a large school district, all teachers from two buildings are interviewed to determine whether they believe the students have less homework to do now than in previous years.
D) Every seventh customer entering a shopping mall is asked to select her or his favorite store.

15. Which of the following represents a ratio level of measurement?
- A) Ranks of football teams
 - B) Temperatures inside 10 refrigerators.
 - C) Salaries of five top managers in Jeddah
 - D) Majors of high school students
16. Theis the sum of the frequencies accumulated to the upper boundary of a class in the distribution.
- A) percent
 - B) frequency polygons
 - C) relative frequency
 - D) cumulative frequency
17. A Pie chart is useful for which of the following purposes?
- A) Representing relative frequencies of categories in a specific year
 - B) Show the relationship between parts and whole
 - C) Representing the cumulative frequencies of the data
 - D) Representing the frequencies of the data, sorted from largest to smallest

Use the following problem to answer the next two questions:

Subjects were randomly assigned to two groups. One group was given a drug A and the other group a drug B. After 6 months, The blood pressure was measured for each individual and the means of blood pressure were compared.

18. What is the dependent variable in the study?
- A) Number of groups
 - B) Type of drugs
 - C) Six months
 - D) Blood pressure
19. What type of study is this?
- A) Inferential study
 - B) Descriptive study
 - C) Experimental study
 - D) Observational study
20. If the mean of a set of data equals 19.00, and a value $X=23.50$ has a z-score of 0.75, then the standard deviation must be:
- A) 18
 - B) 6
 - C) 3
 - D) - 6
21. The weights (in grams) of the contents of several small bottles are 4, 2, 5, 4, 5, 2 and 6. What is the sample variance?
- A) 1.96
 - B) 4.80
 - C) 2.33
 - D) 6.92

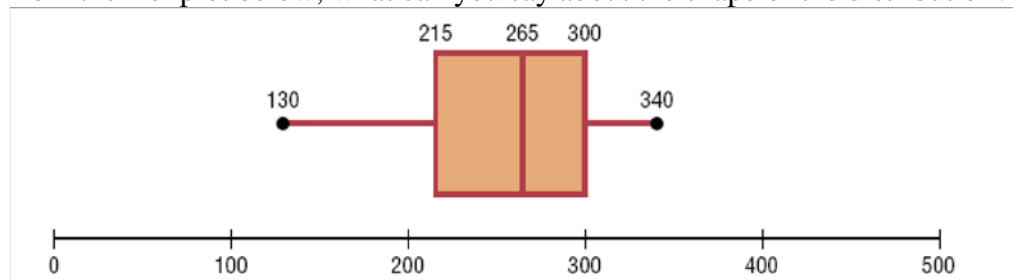
22. What is the mean, median, mode of the following numbers? 1, 8, 12, 3, 6

- A) mean= 20 median= 3 mode=12
 B) mean= 6 median= 12 mode= no mode
 C) mean= 5 median= 6 mode=1
 D) mean= 6 median= 6 mode= no mode

23. Given that the mean of a set of data is 16 and the variance is 4 , what would be the coefficient of variation?

- A) 8% B) 4% C) 25% D) 12.5%

24. From the Boxplot below, what can you say about the shape of the distribution?

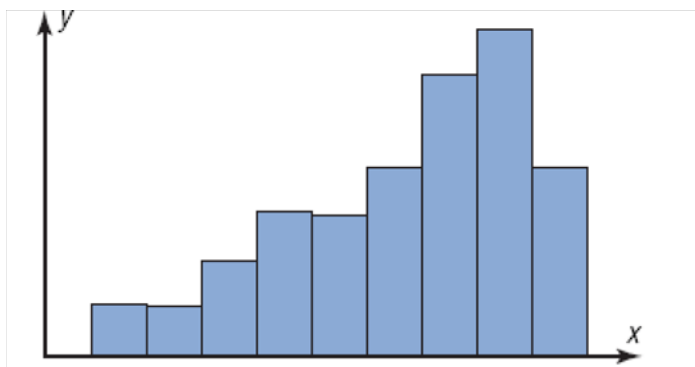


- A) Left skewed B) Symmetric C) Positively skewed D) Bimodal

25. What is the interquartile range of the following numbers; 12, 9, 10, 14, 6, 5, and 2?

- A) 12 B) 5 C) 7 D) 9

26. What is the relationship between the mean, median and mode in the distribution below?



- A) mean = median = mode C) mean > median > mode
 B) mean < median < mode D) mean =median but no mode

27. The appropriate measure of central tendency for nominal data is the ...

- A) mode B) mean C) midrange D) median

28. An instructor grades

exams 20%;
term paper, 30%;
final exam, 50%.

A student had grades of 83, 72, and 90, respectively, for exams, term paper, and final exam. Find the weighted mean.

A) 70.2 **B)** 81.6 **C)** 83.2 **D)** 91

29. If a data value is smaller than $Q_1 - 1.5(IQR)$, this value is considered to be

A) the minimum **B)** an outlier **C)** a z-score **D)** the range

30. In a data set, if all the values are close to the value of the mean, the standard deviation will be ...

A) negative **B)** large **C)** small **D)** as same as the mean

Good luck
Stat 110 Team