

STAT 110 – Fall 2009 – Section 4 – Practice Exam 2 Solutions

1) The Duke Talent Search uses the SAT to screen middle-school students for its program. A reviewer of the program doesn't like this because they think the scores of each student tend to differ a great deal when that same student takes two different forms of the SAT. This reviewer is criticizing what part of using the SAT for this program?

c) The Reliability

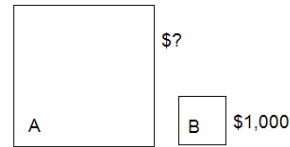
2) The Duke Talent Search uses the SAT to screen middle-school students for its program. A reviewer of the program doesn't like this because the SAT is designed to measure how academically qualified students are after they have finished high school, and not how ready they are for a middle school program. This reviewer is criticizing what part of using the SAT for this program?

d) The Validity

3) One way of looking at measurement is to say that: $\text{measured value} = \text{true value} + \text{bias} + \text{random error}$
Having a lot of bias would indicate that the measurement was:

b) Not Valid

4) In the pictogram to the right, box B is 1 tall and 1 wide. Box A is 5 tall and 5 wide. If box B represents \$1,000, how much does box A stand for?



d) \$25,000

5) Column B is the:

b) Frequency

6) Bar D in the bar graph above corresponds to:

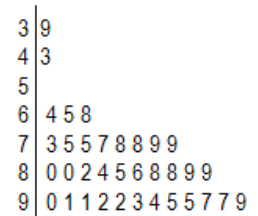
d) Hazel

7) We had to make a bar graph of this data set instead of a histogram because:

a) It is categorical and not quantitative

8) The smallest observation in the stem plot is:

b) 39



9) The distribution of test scores is:

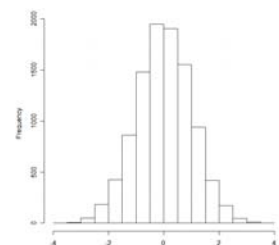
b) Skewed Left

10) Without doing any calculations, we can tell that the mean of these test scores is:

a) Smaller than the median

11) This data set is:

d) Symmetric



12) The median of this data set is:

a) Approximately equal to the mean

13) This center and spread of this data set would be best summarized by:

c) The mean and standard deviation

14) Which of the variables has the largest median?

a) A

15) The inter-quartile range of variable A is approximately:

b) 130

16) Variable C:

c) Is skewed right

17) The mean is:

e) 5.0

18) The median is:

d) 4.5

19) The third quartile (Q_3) is:

d) 6.0.

20) If the 11 in the data set was replaced by a 110, then

a) The standard deviation would get larger

21) The density curve is:

a) Bimodal

22) The total area under the density curve is closest to:

c) 1

23) The mean of this normal distribution is closest to:

c) 2.0

24) The standard deviation of this normal distribution is closest to:

a) 0.5

25) IQ scores are approximately normally distributed with mean 100 and standard deviation of 16. The middle 68% of IQ scores are between

d) 84 and 116

