

Question number is for forms a/b/c in that order
 Answer choice is for forms a/b/c in that order

1/1/2) A psychologist says that scores on one test for "authoritarian personality" can't be trusted because the test counts having any religious beliefs as authoritarian. The psychologist is attacking the test's:

b/a/b) Validity

2/2/3) A psychologist says that scores on a second test for "authoritarian personality" can't be trusted because the same person scores very differently every time they take the test. The psychologist is attacking the test's:

a/b/a) Reliability

3/3/1) Adding more questions to an exam generally makes the final score have less random error. This would make the test be:

c/d/c) More Reliable

4/4/4) A student is making a pictogram where the population of each state is represented by a square. If the population of Iowa (approximately 3 million) is represented by a 1 centimeter x 1 centimeter square, then how big should the square representing Illinois (approximately 12 million) be?

c/a/c) 2 cm x 2 cm

Questions 5-7 concerns the following distribution of educational attainment among people age 30 to 34 in the United States. The data was coded in a spread-sheet so that educational level 1 = "Less than a high school diploma", 2 = "High School Graduate", 3 = "Some College", 4 = "Bachelor's Degree", and 5 = "Advanced Degree".

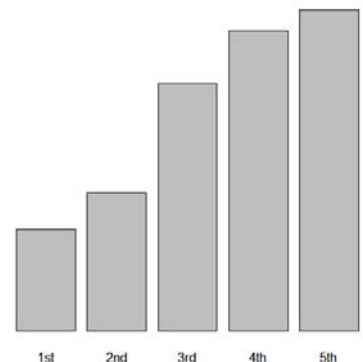
Educational Level	Column A	Column B
1	2.554 million	12.4
2	5.942 million	29.0
3	5.559 million	27.1
4	4.589 million	22.4
5	1.878 million	9.2
Total	20.521 million	100.0

5/5/9) Column B is the:

c/d/c) Relative Frequency

6/6/10) The third bar in the bar graph to the right corresponds to an educational level of:

d/d/d) 4



7/7/11) The educational level used in this data set is:

a/a/a) Categorical

Questions 8-10 refer to the stem plot to the right.

0	00000000000000000000001111111111111111112222334444444444
0	555555666677777788889999
1	0000111123344
1	5677788899
2	0000111234
2	556677899
3	00011344
3	6777888
4	024
4	56668
5	0111234
5	557
6	002
6	
7	1
7	9

8/8/12) The largest observation is:

d/d/d) 7.9

9/9/13) This data set is:

c/d/c) Skewed Right

10/10/14) The best measures of center and spread for this distribution are the:

d/b/d) Median and IQR

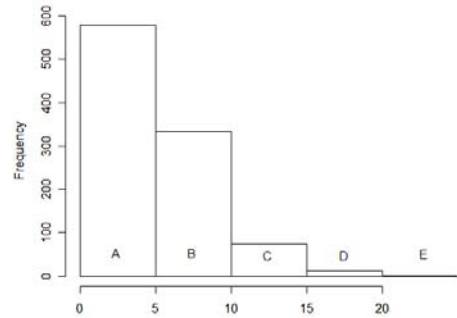
Questions 11 and 12 refer to the histogram to the right:

11/11/15) This data set is:

c/d/c) Skewed Right

12/12/16) The median of this data set is:

c/a/c) Less than the mean



Questions 13-15 use the side-by-side boxplots shown below:

13/13/5) Which of the variables has the largest median?

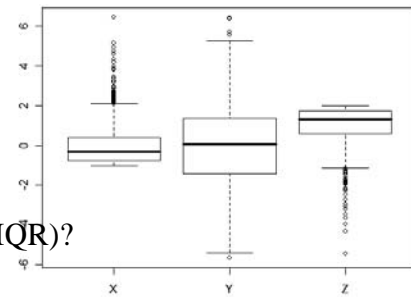
c/c/c) Z

14/14/6) Which of the variables has the largest inter-quartile range (IQR)?

b/b/b) Y

15/15/7) Which of the variables is skewed left?

c/c/c) Z



16/16/8) A data set has $Q_1=3$, Median=15, and $Q_3=17$. How large would an observation need to be considered an outlier?

c/c/c) 38

Questions 17-19 are based on the data set: 12 8 9 2 5

17/17/19) The mean is:

b/b/b) 7.2

18/18/17) The median is:

d/d/d) 8.0

19/19/18) The first quartile (Q_1) is:

b/b/b) 3.5

20/20/20) Most of the houses in a large neighborhood have very similar prices. However there are one or two very expensive ones, and one or two very inexpensive ones.

a/c/a) The IQR would be small and the standard deviation would be large

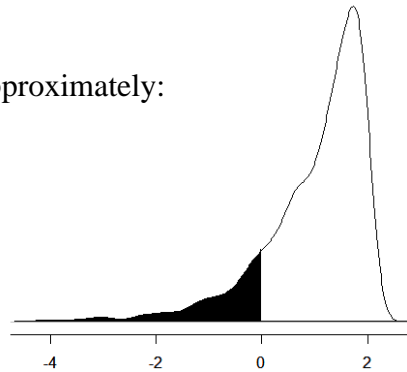
Questions 21-22 refer to the density curve to the right.

21/21/21) The area under the density curve **that is shaded in** is approximately:

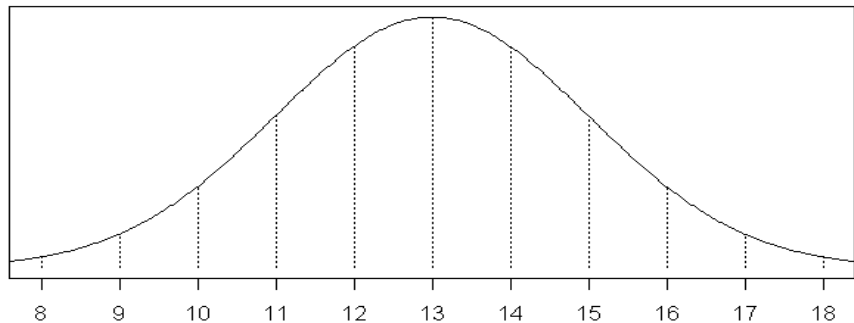
b/b/b) $0.15 = 15\%$

22) This density curve is:

a/c/a) Skewed Left



Questions 23-24 refer to the normal distribution plotted below.



23/23/23) The mean of the above normal distribution is:

d/d/d) 13

24/24/24) The standard deviation of the above normal distribution is:

b/b/b) 2

25/25/25) The heights of American women are approximately normal with a mean of 65 inches and a standard deviation of 2.5 inches. Approximately what percentage of women are between 60 inches and 65 inches?

d/d/d) 47.5%