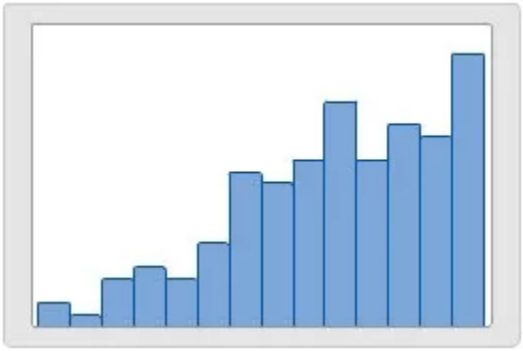
Pre-AP Geometry Unit 1 - Measurement in Data Practice Test

Question 1

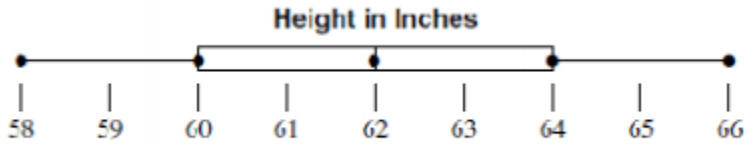
What is the shape of the Data Set?



A. Skewed Left
B. Symmetrical
C. Skewed Right

Question 2

What data value is the upper quartile (Q3)?



A. 64
B. 62
C. 66
D. 58

Question 3

What is an outlier?

A. A value that is much less or much greater than the other values in a data set.
B. The difference between the upper and lower quartiles of a data set.
C. The mean of the distances from each data value in a set to the mean of a set.
D. The difference between the greatest and least numbers in a data set.

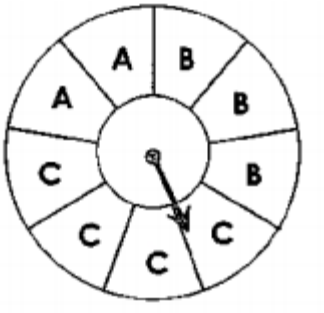
Question 4

The salary of the employees in the office were $15,000; $18,000; $16,000; $14,000; $90,000; and $17,000. What is the best measure of the central tendency of the salaries?

A. Mean
B. Median
C. Mode
D. Range

Question 5

Based on the spinner above, the spinner is spun once. Give the number of favorable outcomes for spinning B and C?



A. 3
B. 4
C. 9
D. 7

Question 6

What is the probability of either event occurring when you spin a spinner with numbers 1-4. Event A: spinning an odd number, Event B: spinning a 4?

A. 1/2
B. 3/4
C. 1/4
D. 1/8

Question 7

A student placed 50 mealworms in the middle of an aquarium containing a light, a cardboard tube and a water dish. He waited five minutes and then recorded the data for the first trial in the table above. The student repeated this procedure two more times, and recorded the results. Read the results of all three trials. Which inference could you make about mealworms based on the results.

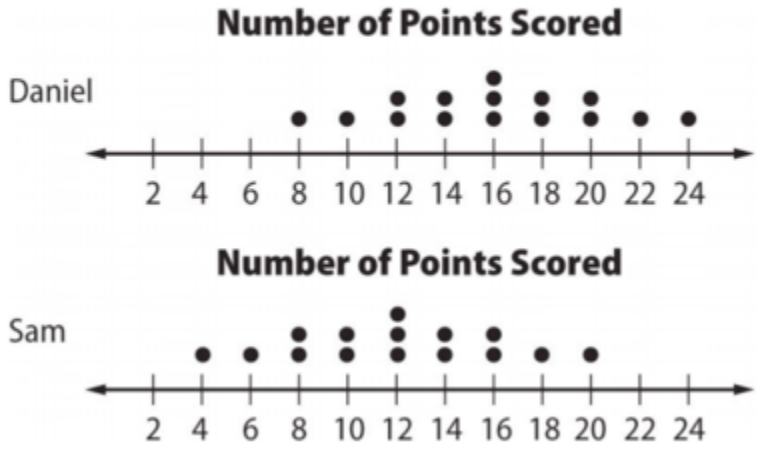
Trial	Number of mealworms under light	Number of mealworms in cardboard tube	Number of mealworms in water dish
1	12	37	1
2	6	44	0
3	7	43	0

A. The mealworms probably prefer the darkness of a cardboard tube.
B. There were 6 mealworms under the light in trial 2.
C. Mealworms love water.
D. There were 36 more mealworms in the cardboard tube versus the light in trial 3.

Question 8

Describe the shape of Daniel's data.

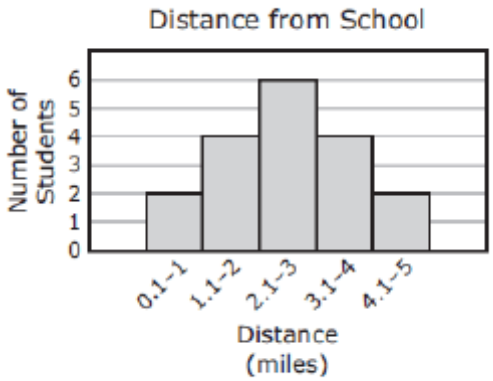
The double dot plot shows the number of points scored by Sam and Daniel in 15 basketball games. What is the difference between the medians?



A. skewed
B. uniform
C. symmetrical

Question 9

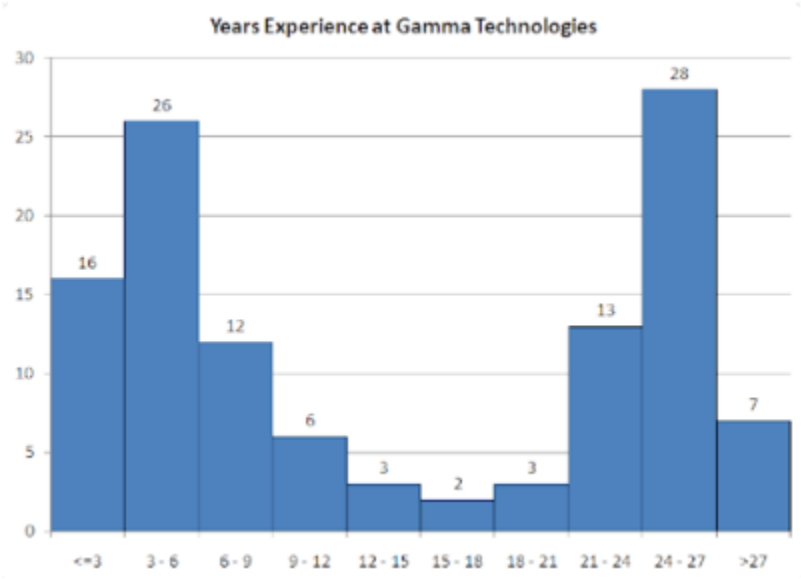
Which statement is best supported by the graph?



A. The shape of the graph is symmetrical, so the mean and median are equal.
B. The shape of the graph is symmetrical, so the mean and median are NOT equal.
C. The shape of the graph is asymmetrical (not symmetrical) so the mean and median are NOT equal.

Question 10

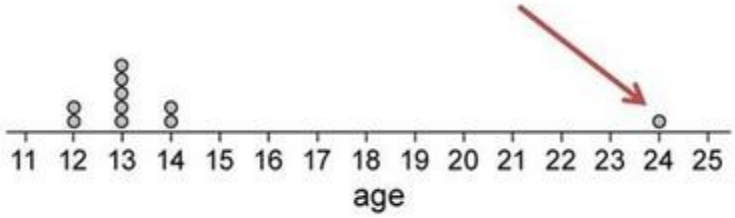
Which description best fits the overall shape of the data?



A. Skewed
B. Uniform
C. Unimodal
D. Bimodal

Question 11

What does the red arrow represent in the dot plot?



A. spread
B. mean
C. outlier
D. median

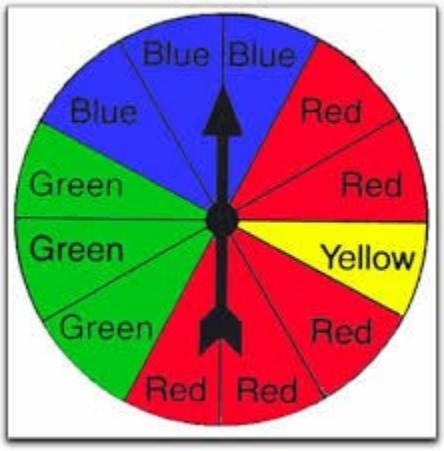
Question 12

Which of the following lists all parts of the five point summary?

A. Mean, Median, Mode, Range, and Total
B. Minimum, Quartile 1, Median, Quartile 3, and Maximum
C. Smallest, Q1, Q2, Q3, and Q4
D. Minimum, Maximum, Range, Mean, and Median

Question 13

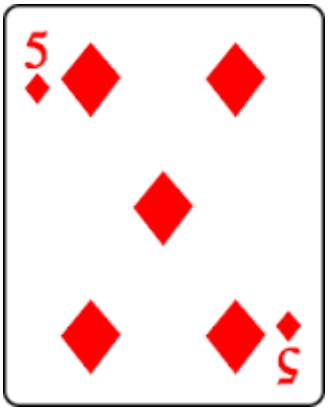
What is the probability of NOT spinning green on this spinner?



A. 1/4
B. 3/4
C. 1/12
D. 5/12

Question 14

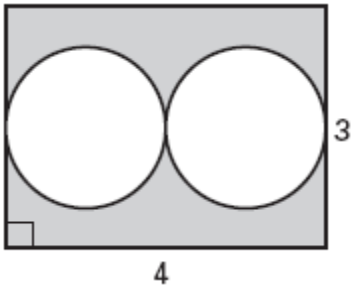
If you draw one card from a standard deck, what is the probability of drawing a 5 or a diamond?



A. 2/52
B. 4/52
C. 16/52
D. 26/52

Question 15

Find the probability that a randomly chosen point in the figure lies in the shaded region.



A. 52.3%
B. 51.4%
C. 47.7%
D. 45.7%

Question 16

Francis surveyed a random sample of 70 students at Franklin High School about their favorite season. Of the students surveyed, 18 chose fall as their favorite season. There are 1816 students at Franklin High School.

Based on the data, what is the most reasonable estimate for the number of students at Franklin High School whose favorite season is fall?

A. 257
B. 467
C. 515
D. 1349

Question 17

A group of randomly selected members of Mothers' Club were asked how many kids they have. The table below shows the results of the survey. There are 120 members in Mothers' Club.

Number of kids	Number of mothers
1	9
2	6
3+	5

Based on the data, what is the most reasonable estimate for the number of Mothers' Club members who have fewer than 2 kids?

A. 9
B. 15
C. 54
D. 66

Question 18

A high school has a policy that students' phones must be kept away during class. A principal used the school roster to poll a random sample of 50 students, and only 10% said that they ever had their phone out during class. The next day, the principal observed classrooms and noticed that approximately 25% of students had their phone out at some point during class.

Which of these is the most concerning potential source of bias in the principal's poll?

A. Bias from undercoverage
B. Bias from using voluntary response
C. Bias from using a convenience sample
D. Response bias
E. Nonresponse bias

Question 19

An airline wants to survey customers about their overall satisfaction. They take a random sample of 1000 customers who have flown in the past month and email

them a survey. The email also offers those who complete the survey a $25 gift card that can be used almost anywhere.

Which of these is the best example of nonresponse bias?

A. Satisfied customers might be less likely to complete the survey than dissatisfied customers.
B. People might feel pressured to say they are more satisfied than they really are.
C. Some people might only complete the survey for the gift card.
D. Customers who have flown in the past month might not be representative of all customers.
E. Customers without email addresses cannot be a part of the survey, and their satisfaction may be different than those in the sample.

Answer Key

1. A
2. A
3. A
4. B
5. D
6. B
7. A
8. C
9. A
10. D
11. C
12. B
13. B
14. C
15. C
16. B
17. C
18. D
19. A