

Math 6 - Unit 6: Statistics

Unit 6 Study Guide

Name: _____

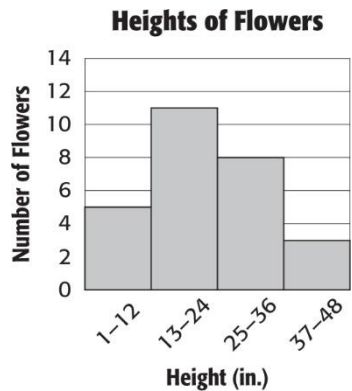
Class Period: 1 2 3 4 Date: _____

Use the following data to answer problems 1-4.

At the last five basketball games, Simone scored the following points: **12, 15, 9, 11, 8.**

- 1) What is the **mean** number of points Simone scored?
- 2) What is the **median** number of points Simone scored?
- 3) What is the **mode** of Simone's scores?
- 4) What is the **range** of Simone's scores?

Use the histogram below to answer questions 5-8.



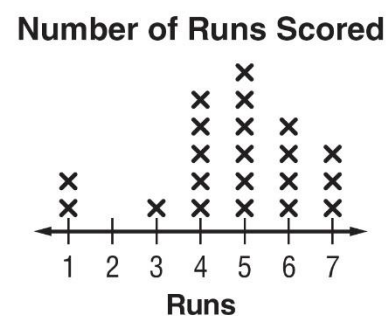
- 5) How many flowers were less than 25 inches in height?
- 6) How many flowers are in the 25-36 in. interval?
- 7) How many flowers were at least 13 inches tall?
- 8) Which interval had the fewest number of flowers?

For questions 9-13 indicate whether the question IS statistical (S) or NOT statistical (NOT).

- 9) How many times has each of my classmates been to the beach?
- 10) How many kids does Mrs. Katz teach?
- 11) How many pairs of pants does each of my family members own?
- 12) How many ice cream shops are in each town in Georgia?
- 13) How many songs are on Katherine's iPod?

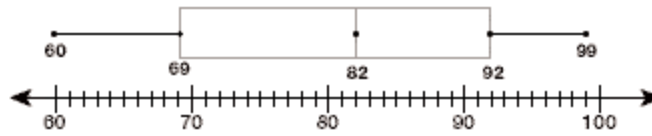
Use the dot plot to answer problems 14 - 16:

- 14) What is the **mode** of the data?
- 15) What is the **range** of the number of runs scored?
- 16) What is the **mean** number of runs scored?
- 17) Which measure of center is **MOST** affected by an outlier?



Use the box plot to answer questions 18 – 21.

Number of Shoes sold per Day



18) What percent of data is **GREATER THAN 69** (the lower quartile)?

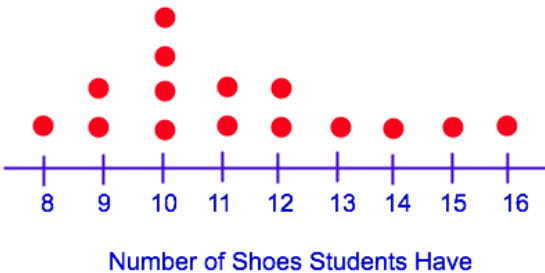
19) What is the **median** of the data in the box plot?

20) What is the **IQR** of the data in the box plot?

21) Which **set of data** could be used to create the box plot?

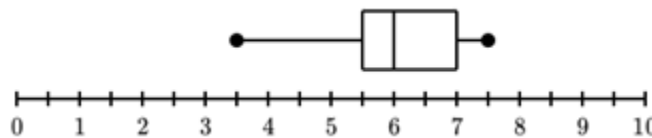
- a. 60, 61, 61, 69, 79, 80, 99
- b. 60, 61, 61, 82, 83, 90, 99
- c. 60, 61, 61, 82, 79, 80, 100
- d. 0, 61, 61, 82, 79, 80, 99

22) How many **total people** were surveyed in the dot plot below?



Use the box plot to answer questions 23-24.

Number of Baskets Made for Each Player on the Team



23) What is the **interquartile range** (IQR) in the box plot?

24) What percent of participants **scored more than 6 baskets**?

25) The 5-Number Summary of a box plot is shown below.

What is the **interquartile range** (IQR) for this set of data?

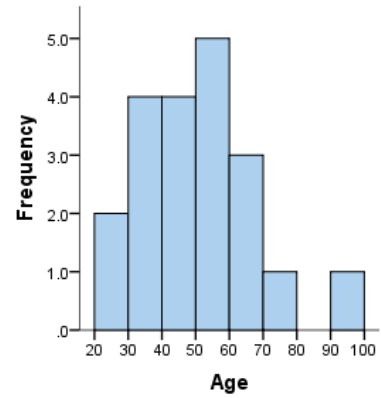
Minimum: 7 Lower Quartile (Q₁): 9 Median: 18 Upper Quartile (Q₃): 26 Maximum: 58

Use the histogram to the right to answer questions 26-27.

26) The histogram to the right shows the ages of the adults who went to see **Black Panther**.

Which statement about the histogram is **TRUE**?

- a. Most ages fall within the 60-70 interval.
- b. Most ages fall within the 20-30 interval.
- c. No person fell within the 80-90 age interval.
- d. No person fell within the 50-60 age interval.



27) How many more people who went to see **Black Panther** are in their 40s than in their 70s?

28) The data below represents the number of students missing a pencil in all the classes on 6B.

10, 5, 6, 5, 11, 10, 2, 2, 3, 8, 16, 2, 10, 3, 8, 2

a) Make a **box plot** of the data.



b) Find one measure of spread. Clearly identify which measure of spread you are finding. _____

c) Find one measure of center. Clearly identify which measure of center you are finding. _____

d) Circle one of the choices below to describe the shape of the box plot.

- a. skewed left
- b. skewed right
- c. symmetrical

29) If Lizzie wants to get an overall test average of 90 in her math class and she currently has scores of **90, 75, 88 and 100**, what is the minimum score she would need on her next test to have a 90 test average?

30) What are three measures of center? _____

31) What are two measures of spread (variation)? _____

32) How are IQR and Range similar? _____

33) How are IQR and Range different? _____

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ANSWER KEY

Name: _____

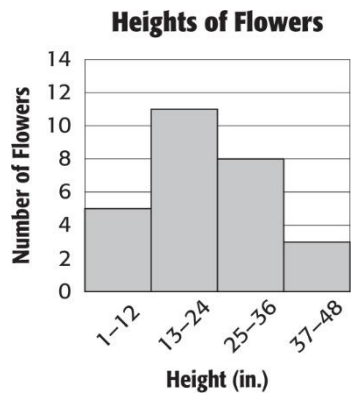
Class Period: 1 2 3 4 Date: _____

Use the following data to answer problems 1-4.

At the last five basketball games, Simone scored the following points: **12, 15, 9, 11, 8.**

- 1) What is the **mean** number of points Simone scored? **11**
- 2) What is the **median** number of points Simone scored? **11**
- 3) What is the **mode** of Simone's scores? **None**
- 4) What is the **range** of Simone's scores? **7**

Use the histogram below to answer questions 5-8.



- 5) How many flowers were less than 25 inches in height? **16**
- 6) How many flowers are in the 25-36 in. interval? **8**
- 7) How many flowers were at least 13 inches tall? **22**
- 8) Which interval had the fewest number of flowers? **37-48**

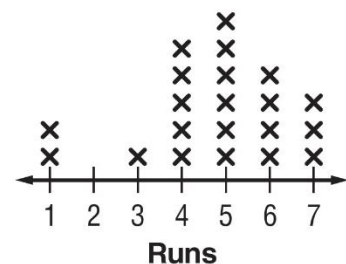
For questions 9-13 indicate whether the question IS statistical (S) or NOT statistical (NOT).

- 9) How many times has each of my classmates been to the beach? **S**
- 10) How many kids does Mrs. Katz teach? **NOT**
- 11) How many pairs of pants does each of my family members own? **S**
- 12) How many ice cream shops are in each town in Georgia? **S**
- 13) How many songs are on Katherine's iPod? **NOT**

Use the dot plot to answer problems 14 - 16:

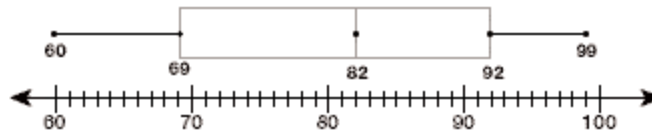
- 14) What is the **mode** of the data? **5**
- 15) What is the **range** of the number of runs scored? **6**
- 16) What is the **mean** number of runs scored? **$100 \div 21 = 4.8$**
- 17) Which measure of center is **MOST** affected by an outlier? **Mean**

Number of Runs Scored

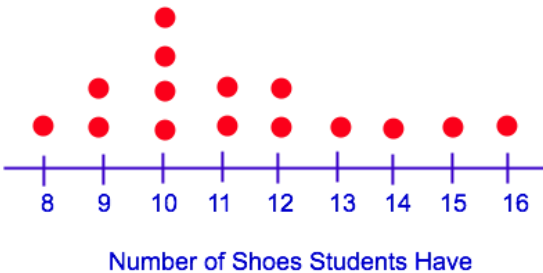


Use the box plot to answer questions 18 – 21.

Number of Shoes sold per Day

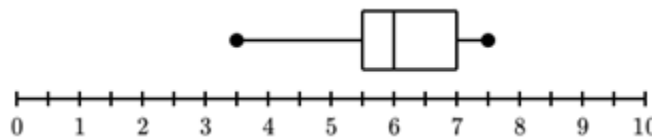


- 18) What percent of data is **GREATER THAN 69** (the lower quartile)? **75**
- 19) What is the **median** of the data in the box plot? **82**
- 20) What is the **IQR** of the data in the box plot? **$92 - 69 = 23$**
- 21) Which **set of data** could be used to create the box plot? **B**
- a. 60, 61, 61, 69, 79, 80, 99 b. 60, 61, 61, 82, 83, 90, 99
- c. 60, 61, 61, 82, 79, 80, 100 d. 0, 61, 61, 82, 79, 80, 99
- 22) How many **total people** were surveyed in the dot plot below? **15 people**



Use the box plot to answer questions 23-24.

Number of Baskets Made for Each Player on the Team



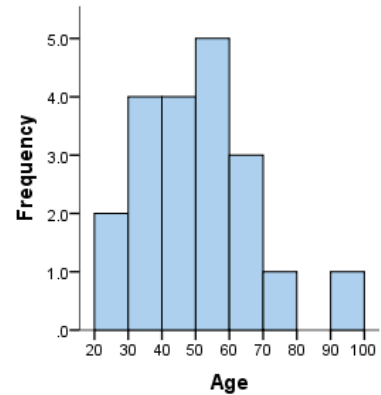
- 23) What is the **interquartile range** (IQR) in the box plot? **$7 - 5.5 = 1.5$**
- 24) What percent of participants **scored more than 6 baskets**? **50%**
- 25) The 5-Number Summary of a box plot is shown below.
 What is the **interquartile range** (IQR) for this set of data? **$26 - 9 = 17$**
 Minimum: **7** Lower Quartile (Q₁): **9** Median: **18** Upper Quartile (Q₃): **26** Maximum: **58**

Use the histogram to the right to answer questions 26-27.

26) The histogram to the right shows the ages of the adults who went to see **Black Panther**.

Which statement about the histogram is **TRUE**? **C**

- a. Most ages fall within the 60-70 interval.
- b. Most ages fall within the 20-30 interval.
- c. No person fell within the 80-90 age interval.
- d. No person fell within the 50-60 age interval.

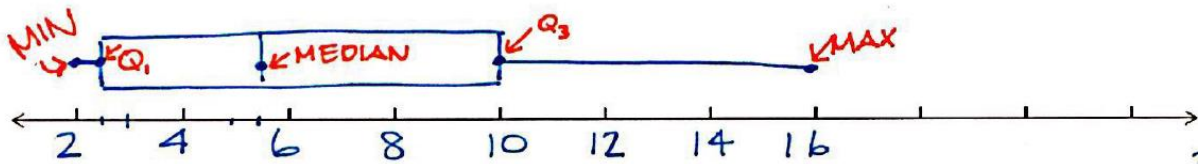


27) How many more people who went to see **Black Panther** are in their 40s than in their 70s? **3**

28) The data below represents the number of students missing a pencil in all the classes on 6B.

10, 5, 6, 5, 11, 10, 2, 2, 3, 8, 16, 2, 10, 3, 8, 2

a) Make a **box plot** of the data.



b) Find one measure of spread. Clearly identify which measure of spread you are finding. **RANGE: 14, IQR: 7.5**

c) Find one measure of center. Clearly identify which measure of center you are finding. **MEAN: 6.4, MEDIAN: 5.5, MODE: 2**

d) Circle one of the choices below to describe the shape of the box plot.

- a. skewed left
- b. skewed right**
- c. symmetrical

29) If Lizzie wants to get an overall test average of 90 in her math class and she currently has scores of **90, 75, 88 and 100**, what is the minimum score she would need on her next test to have a 90 test average? **97**

30) What are three measures of center? **Mean, Median and Mode**

31) What are two measures of spread (variation)? **Range and IQR**

32) How are IQR and Range similar? **They are both measures of spread that show how far data is spread out.**

33) How are IQR and Range different? **The Range is the measure of spread for the entire data set, where IQR is the measure of spread of the middle 50% of the data.**