



Coordinate Algebra EOC (GSE) Quiz Answer Key

Interpreting Categorical and Quantitative Data - (MGSE9-12.S.ID.3) Interpret Differences

Student Name: _____

Date: _____

Teacher Name: THUYNGA DAO

Score: _____

1)

{20, 30, 40, 50, 60, 70, 80}

The median of this set of numbers is

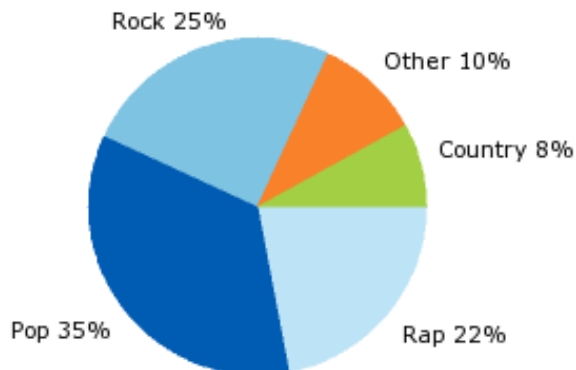
- A) 20
- B) 30
- C) 50
- D) 60

Explanation:

The median of this data set is **50**. The median is always the middle value.

2)

Favorite Kind of Music



The students in Christie's school were asked to pick their favorite kind of music, so their principal would know what kind of music to play at their school dance. The results are shown in this pie graph. What can you tell from the graph?

- A) More students like rap music than rock music.
- B) More students like country music than pop music.
- C) **The principal will play pop music for the students at the dance.**
- D) The ratio of students who like rock to those who like pop is 7:5.

Explanation:

You can tell from the graph that **the principal will play pop music for the students at the dance**, since most of the students in the school prefer this type of music.

3)

{20, 30, 40, 50, 60, 70, 80}

The mean of this set of numbers is

- A) 20
- B) 50**
- C) 55
- D) 60

Explanation:

The mean is **50**. The mean is the same as the average. Add all the number set and divide by the total number of items.

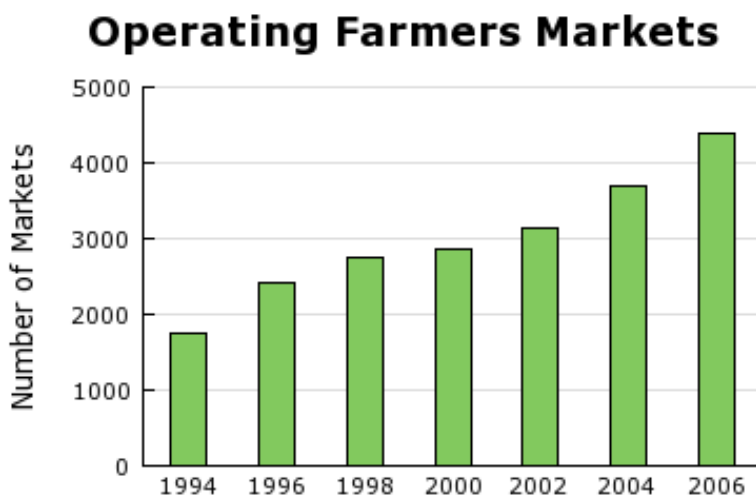
4) You did a survey on favorite ice cream flavor and you want to display the results of the survey so you can easily COMPARE the flavors to each other. Which type of graph would be the best way to display the results of your survey?

- A) Bar Graph**
- B) Line Graph
- C) Scatter Plot
- D) Coordinate Graph

Explanation:

In a **bar graph**, you could easily show a comparison between the most popular flavors. Each bar would represent a different flavor, and the height of each bar would represent the number of people that chose that flavor. The higher the bar, the more popular it must be.

5)



The graph from the US Department of Agriculture shows the growth of farmers markets in the United States. What was the first year that the number of farmers markets increased to over 3000?

- A) 2000
- B) 2001
- C) 2002**
- D) 2003

Explanation:

The solution is **2002**. In the year 2000 the number of farmers markets was less than 3000 and by 2002 it had increased to more than 3000.

6)

3, 7, 8, 2, 4, 3, 4, 6, 5, 4

What is the mode in the data set?

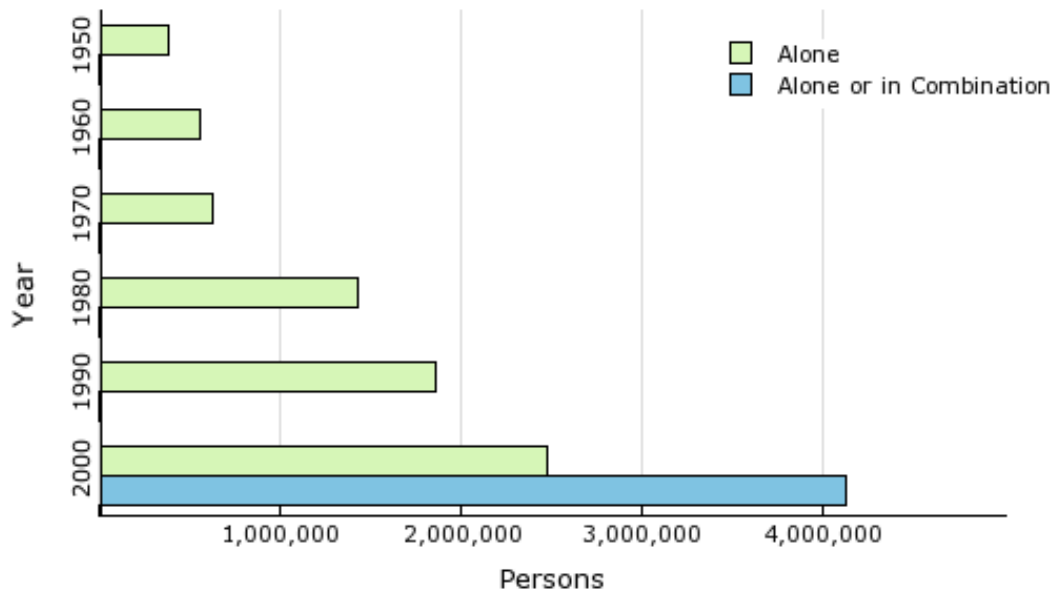
- A) 3
- B) 4**
- C) 6
- D) 7

Explanation:

Solution: **4**. The mode is the most frequently occurring number in the data set.

7)

American Indian and Alaska Native Population



According to the graph, which statement is correct?

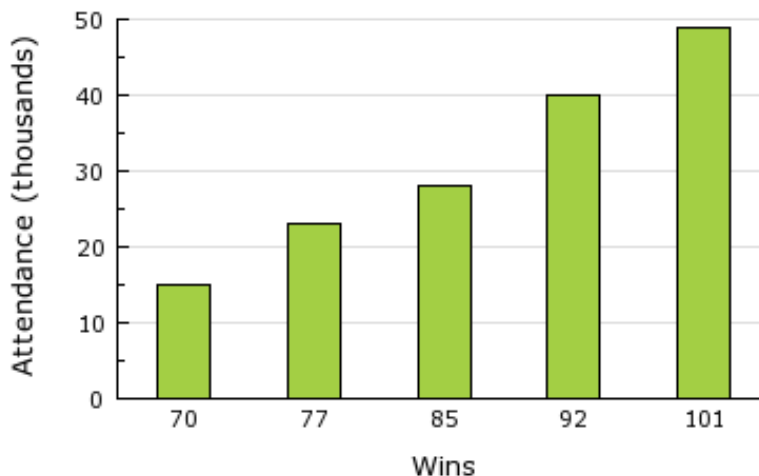
- A) There were 4 million American Indians in 1970.
- B) Populations have increased between 1950 - 2000.**
- C) Populations have decreased between 1950 - 2000.
- D) Millions of persons are graphed on the Y Axis of this graph.

Explanation:

The only correct statement according to the graph is that **Populations have increased between 1950-2000**.

8)

Wins and Attendance



The bar graph here shows both the number of games a baseball team won during a particular season and the attendance for that season. How are these two variables related?

- A) **As wins increase, so does attendance.**
- B) As wins increase, attendance decreases.
- C) As attendance increases, wins decrease.
- D) As attendance decreases, wins increase.

Explanation:

The more the team wins, the more fans come to see them. **As wins increase, so does attendance.**

9) Kendrick's math quiz grades are 90, 100, 48, 88, 100, and 96. Find the MEAN of Kendrick's scores.

- A) 48
- B) 52
- C) **87**
- D) 93

Explanation:

The mean of Kendrick's scores is **87**. Notice that 48 is an outlier in the data set. This causes his mean score to be lower.

$$48 + 88 + 90 + 96 + 100 + 100 = 522$$

$$522 \div 6 = 87$$

10) These are typical bowling scores for 16-20 year olds: 74, 88, 89, 95, 99, 100, 101, 106. What is the mean for the data?

- A) 32
- B) 74
- C) **94**
- D) 97

Explanation:

$$\frac{74 + 88 + 89 + 95 + 99 + 100 + 101 + 106}{8} = 94$$

11)

Test Scores

Test Number	Score
1	86
2	84
3	79
4	87
5	75
6	84
7	89
8	90
9	88
10	92

Sara has been using an online review program to take practice tests for her upcoming graduation exam. Her scores are shown in the table. What is the mean of the data?

- A) 17
- B) 79
- C) **85.4**
- D) 86

Explanation:

The solution is **85.4**. To find the mean of the data set, we add all the elements (854) and divide by the total number of elements (10).

12)

2, 3, 5, 9, 17, 22, 31, 39

Regina kept track of the points she scored during her team's first eight basketball games. What is Regina's mean score?

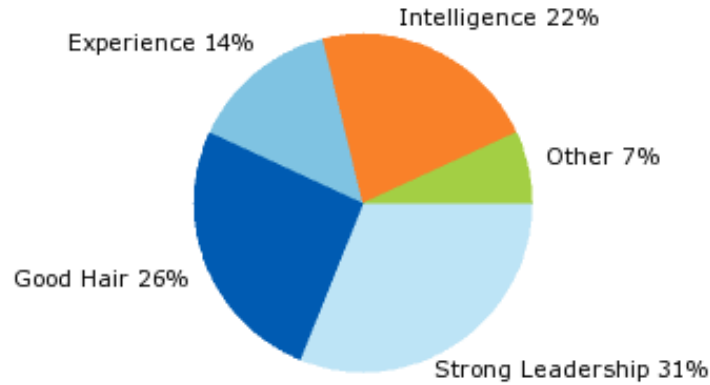
- A) 13
- B) **16**
- C) 17
- D) 37

Explanation:

The mean of a data set is its arithmetic average; here that is $128/8$ or **16**.

13)

Most Important Presidential Qualities



A group of likely voters was interviewed about their presidential preference. This circle graph shows what quality they thought was most important in a president. You can tell from the chart that voters considered

- A) experience more important than good hair
- B) intelligence more important than good hair.
- C) experience more important than intelligence.
- D) **strong leadership more important than good hair.**

Explanation:

The only choice supported by the pie chart is that the voters considered **strong leadership more important than good hair.**

14) From the graphs listed, which is most likely used to display a percentage?

- A) area
- B) bar
- C) **circle**
- D) histogram

Explanation:

A **circle** graph would be best to display percentages. The total circle represents 100% and the bigger the slice, the greater the % of each part.

15)

Free-Throw Shooting Contest

Student	Total
Michael	26
Sara	34
Kelly	42
David	40
Juwon	38
Seung	35
Miguel	20
Maria	34
Curt	45
Jake	18

Coach King is holding a free-throw shooting contest for some students in his PE class. The students participating in the contest shoot 50 free throws each. The results are shown in the table. What is the mean of the data?

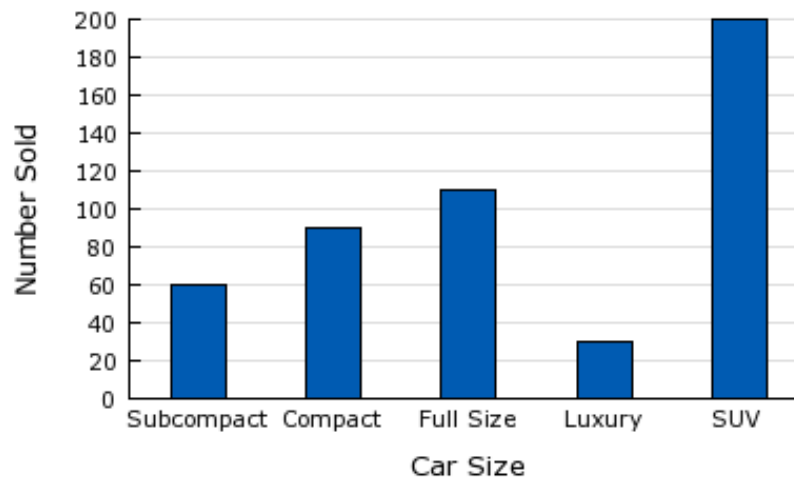
- A) 24
- B) 27
- C) 33.2**
- D) 34.5

Explanation:

The solution is **33.2**. The mean is found by adding the elements together (332) and dividing by 10. This results in a mean of 33.2.

16)

2008 Car Sales



The bar graph shows the 2008 car sales for a town where 500 cars were sold during the year. Based on the information in the graph, which statement is true?

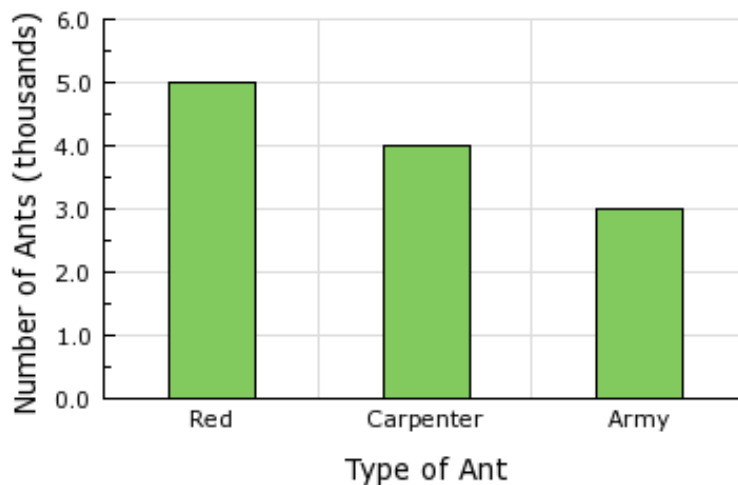
- A) More compacts were sold than luxury cars.
- B) Fewer compacts were sold than subcompacts.
- C) More compacts were sold than full-sized cars.
- D) Fewer subcompacts were sold than any other car size.

Explanation:

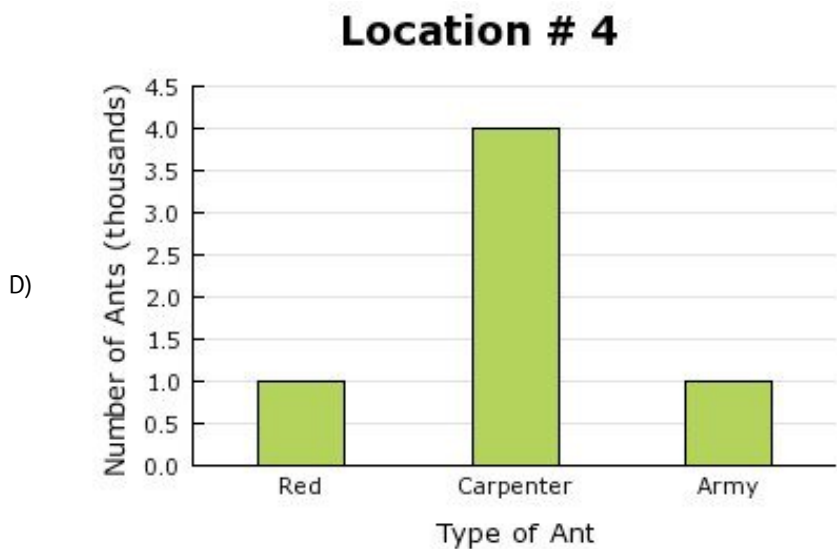
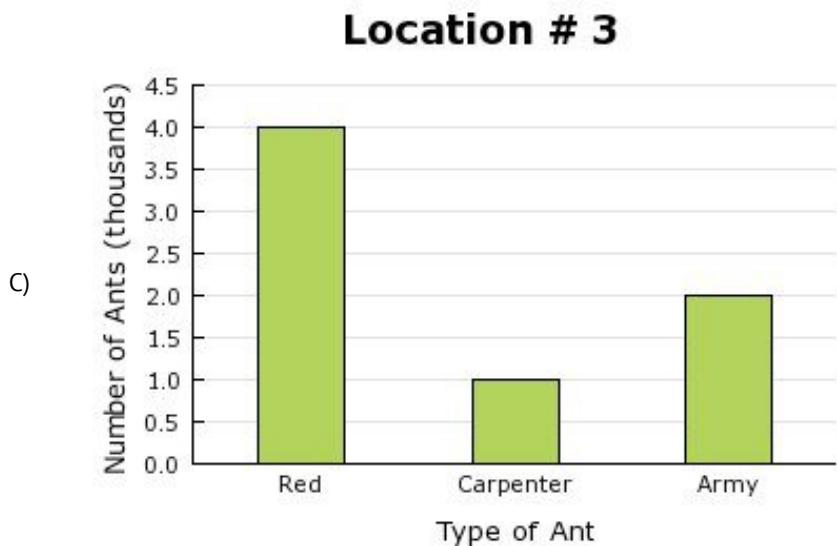
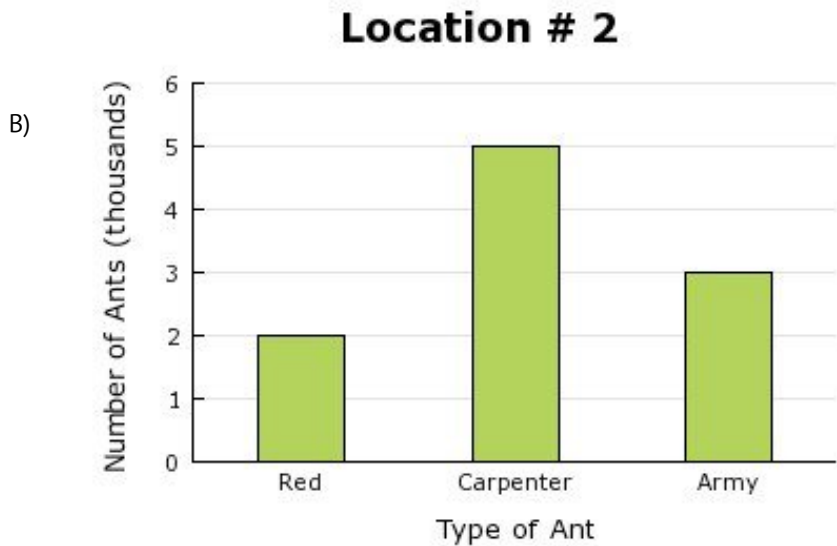
More compacts were sold than luxury cars. Only 200 of the 500 total sales were of SUVs, while the combined sale of the other four sizes was 300.

17) A scientist recorded the average number of three types of ants she saw at four locations. Which location has the LARGEST mean number of ants?

Location # 1



A)



Explanation:

At **Location #1** the mean is 4,000. This is larger than the other locations.

18)

,1, 1, 2, 3, 5, 6, 7, 8, 8, 8, 9, 14

The students in Tina's class are selling tickets to a car wash to raise money for a local animals shelter. The number of tickets by twelve students is shown here. What is the mode of these numbers?

- A) 6
- B) 6.5
- C) 7.5
- D) **8**

Explanation:

The mode is the value that occurs most often in a data set. Here, that is **8**, which occurs three times.

19) If I have a data set that overall is symmetric and I add a data point that is very high, what will happen to the mean?

- A) The mean will decrease.
- B) The mean will increase.**
- C) The mean will be raised by one data point value.
- D) The mean will not change unless that data point was already in the data set.

Explanation:

The mean is affected by outliers. So if a data point that is significantly larger than all others is added **The mean will increase.**

20) Which graph would be the best to represent the amount of rainfall each month for one year?

- A) bar graph**
- B) pie graph
- C) flow chart
- D) auto graph

Explanation:

A **bar graph** would be the best to represent the amount of rainfall each month for one year.

21)

72, 80, 74, 68, 65, 66, 72, 70, 68, 80, 74

Sara's recent golf scores are shown. From the data shown what is the median of her scores?

- A) 65
- B) 71
- C) 72**
- D) 80

Explanation:

Sara's median score was a **72**. The median score is the score in the middle, so put them in order from high to low: 65,66,68,68,70,72,72,74,74,80,80. With 11 values, 72 is the middle score.

22) For five days Vicki recorded the temperature outside. The temperature (°F) was 36.9°, 34.6°, 37°, 40.2°, 32.8°. About what was the average daily temperature?

- A) 7°
- B) 35°
- C) 36°**
- D) 37°

Explanation:

36°

$$36.9 + 34.6, 37, 40.2, 32.8 = 181.5$$

$$181.5 / 5 = 36.3$$

or each value can be rounded and then averaged

23) What is the range of this data set?

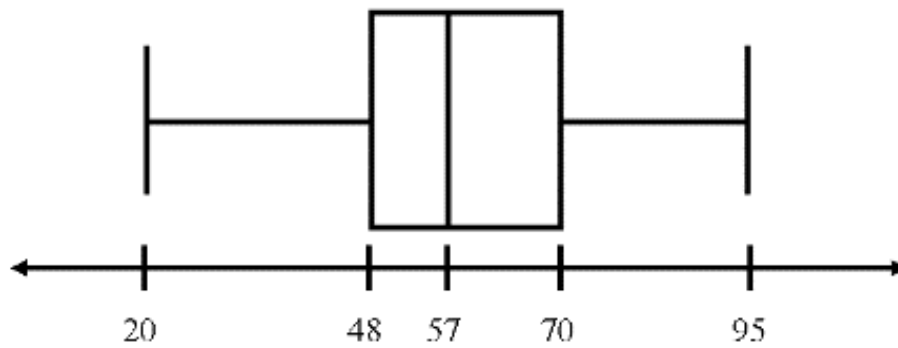
22, 30, 49, 71, 85, 88, 92, 97, 99

- A) 55
- B) 70.3
- C) 72.7
- D) 77**

Explanation:

The range is the largest value of a data set minus the smallest value, so in this example, this is $99 - 22 = 77$. The range is a poor measure of variation unless the sample size is large.

24)



For the data set summarized in the boxplot, identify the RANGE.

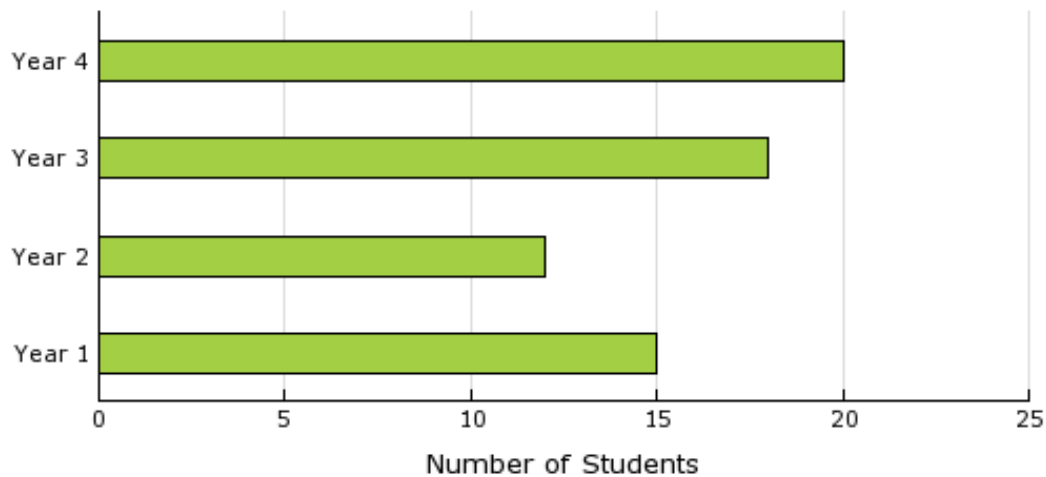
- A) 22
- B) 37
- C) 75
- D) 95

Explanation:

75 is correct. The range is MAX - MIN, or 95 - 20.

25)

Number of Students in Jamal's Class with the Flu



This graph shows the number of students in Jamal's class who had the flu during the winter over the last four years. There are 25 students in the class. Which statement is true?

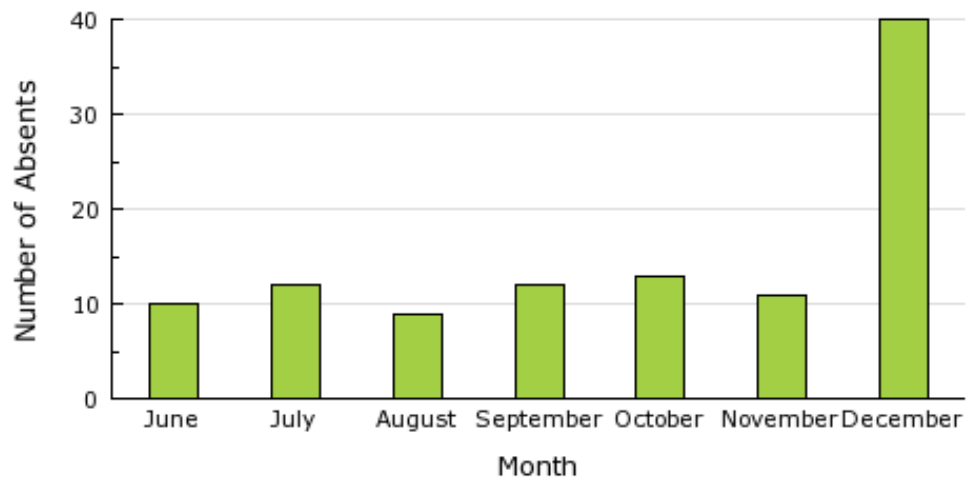
- A) Flu is rare in the winter.
- B) The number of students with the flu has increased each year.
- C) The number of students with the flu has decreased each year.
- D) **Many of the students in Jamal's class have had the flu each winter.**

Explanation:

There are 25 students in Jamal's class, and each winter at least 12 of them have had the flu and one year 20 of them had the flu. This means that **many of the students in Jamal's class have had the flu each winter.**

26)

Days Absent



Ms. Thompson collected data to determine the number of students absent for each month of school during the first semester. Identify the striking deviation in her data.

- A) August
- B) December**
- C) June
- D) October

Explanation:

December is correct. The December bar has a much greater occurrence of absent then the other data recorded by Ms. Thompson

27)

72, 80, 74, 68, 65, 66, 72, 70, 65, 80, 75

Jennifer's recent golf scores are shown. What is her mean score, rounded to the nearest tenth?

- A) 65.5
- B) 71
- C) 71.5**
- D) 72

Explanation:

Tiger's average score was a **71.5**. Simply add the scores and divide by the total number of scores =

$$\frac{(72+80+74+68+65+66+72+70+65+80+75)}{11} = 71.5$$

28)

72, 80, 74, 68, 65, 66, 72, 74, 65, 80, 74

Michale got these scores the last times he played golf. According to the data shown, what is the mode of his scores?

- A) 66
- B) 71
- C) 72
- D) 74**

Explanation:

The mode is **74**. 74 is the most common element in the set.

29)

Town	Number of Cats	Number of Dogs
Avon	80	47
Brant	90	120
Carmel	55	50
Derby	41	86
Eaton	72	91

This table shows the number of cats and the number of dogs kept as pets in five different towns. What can you tell from this table?

- A) The ratio of cats to dogs in Brant is 4:3.
- B) There are more cats in Brant than in any other of the towns.**
- C) There are fewer dogs in Carmel than in any other of the towns.
- D) Avon is the only one of the five towns that has more cats than dogs.

Explanation:

The only true statement here is that **there are more cats in Brant than in any other of the towns.**

30)

23, 34, 27, 7, 30, 26, 28, 31, 34

What number is an outlier for the given data?

- A) 7**
- B) 23
- C) 31
- D) 34

Explanation:

7 is the smallest number and has the biggest distance from the next closest number making it an outlier.