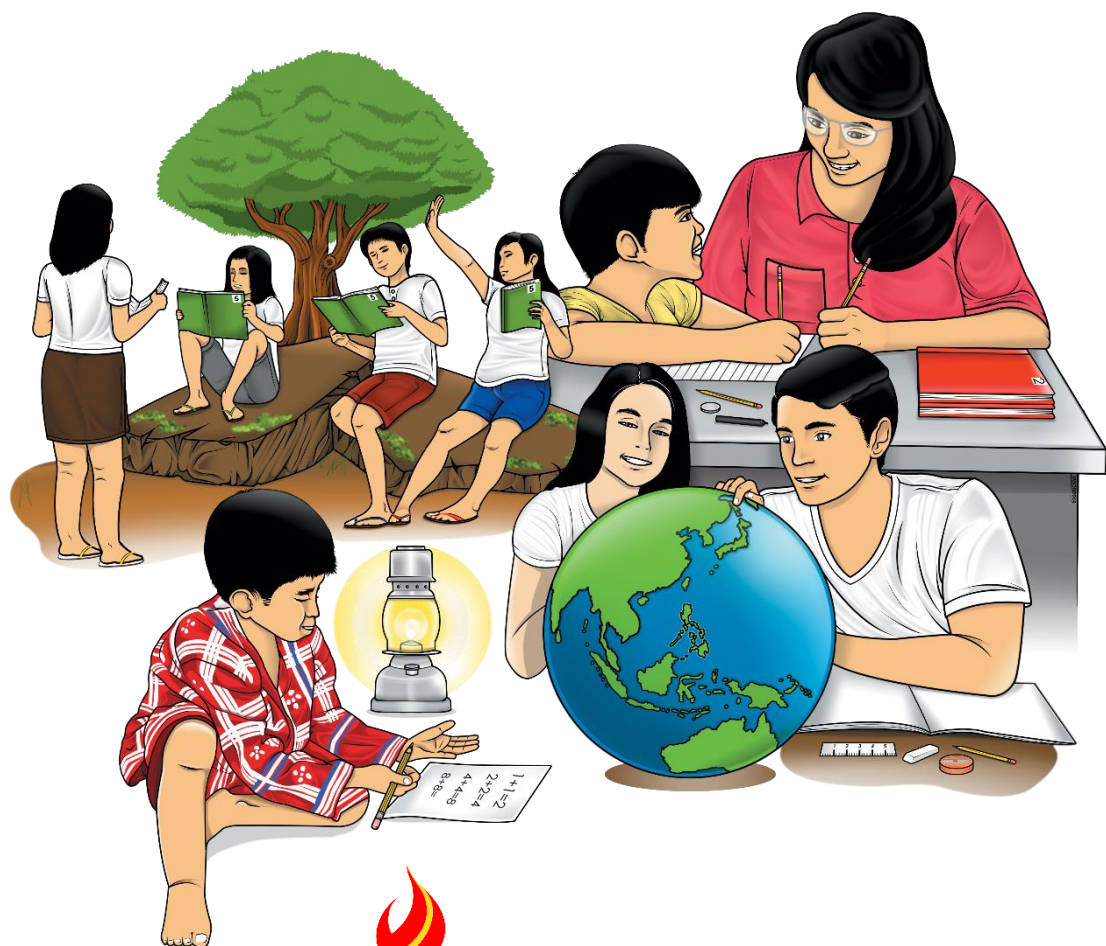


# Mathematics

## Quarter 4 – Module 6: Analysis and Interpretation of Statistical Data



**Math - Grade 7**  
**Alternative Delivery Mode (ADM)**  
**Quarter 4 – Module 6: Analysis and Interpretation of Statistical Data**  
**First Edition, 2020**

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# **Mathematics**

## **Quarter 4 – Module 6: Analysis and Interpretation of Statistical Data**

## **Introductory Message**

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.



## ***What I Need to Know***

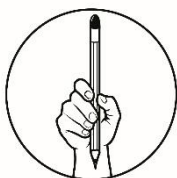
This module was designed and written with you in mind. It is here to help you learn how to analysis and interpret statistical data. This module is designed to be self-sufficient for the current learning situation. The language used recognizes your vocabulary level of students. The lessons are arranged to follow the standard sequence of the course in the curriculum guide. However, the order in which you read them can be changed to correspond with the textbook you are now using.

The module is divided into two lessons, namely:

- Lesson 1 – Statistical Measures in Analysis and Interpretation of Data.
- Lesson 2 – Drawing Conclusions from Statistical Data.

After going through this module, you are expected to:

1. use appropriate statistical measures in analyzing and interpreting statistical data; and
2. draw conclusions from graphic and tabular data and measures of central tendency and variability



## ***What I Know***

Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

1. What measure is equal to 30 in the data set: 30, 20, 30, 40, 60, 50, 30, 10, 30, 20?  
a. mean  
b. median  
c. mode  
d. range
2. What measure is equal to 5 in the set of scores: 3, 4, 5, 5, 6, 7, 8?  
a. mean  
b. median  
c. median and mode  
d. mean and median
3. What measure is equal to 2cm in the data set: 1.4cm, 1.5cm, 2cm, 1cm, 2cm?  
a. mean  
b. median  
c. median and mode  
d. mode

4. The score that appeared most in Grade 7 science quiz is 20. What measure of central tendency is 20?
- mean
  - median
  - mode
  - range
5. The following are the ages of the students in a literature class.  
24, 30, 18, 28, 32, 18, 20
- What measure will determine the age gap of the oldest and youngest student?
- mean
  - median
  - mode
  - range
6. The houses of Kim, Jane and Myra are 2.5km, 1km and 3km away from the school respectively. What measure will you use to get the average distance?
- mean
  - median
  - mode
  - range

*For items 7-9, refer to the table below.*

There are three different Basketball teams and each has played 3 games. The team's score from each of its games are shown below.

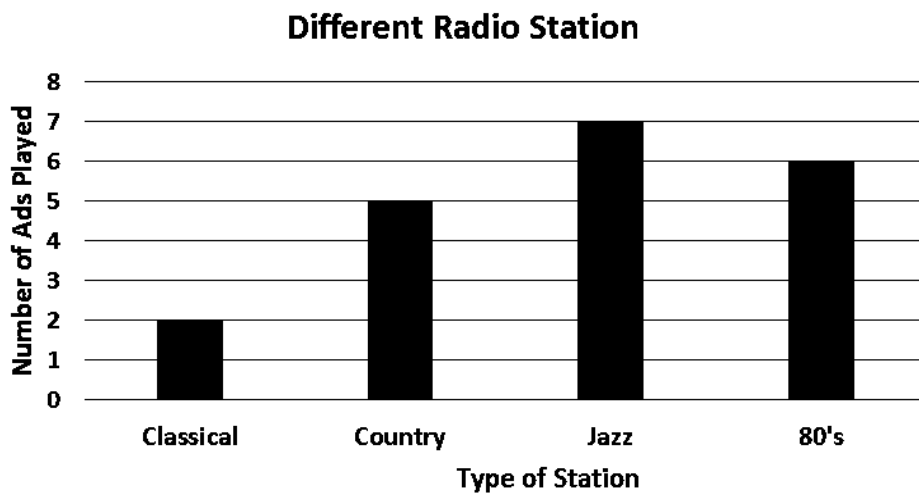
Team	Game 1	Game 2	Game 3
Lion	92	89	95
Jaguar	93	88	80
Wolves	89	88	89

7. What statistical measure will determine the team with the most winning game?
- mean
  - median
  - mode
  - variance/standard deviation
8. You want to join the best team. What statistical measure will help you determine which team performed best?
- mean
  - median
  - mode
  - range
9. What statistical measure will you use to determine how close scores are?
- mean
  - median
  - mode
  - variance/standard deviation
10. Gina is a manager in a shoe business, she wanted to know what brand is most saleable. What measure of central tendency will be appropriate to use?
- mean
  - median
  - mode
  - variance/standard deviation
11. The mean score of 40 students in a quiz is 36.6. What does it mean when a student scored below 36.6?
- The student who scored below 36.6 did study their lesson well.
  - The student who scored below 36.6 got almost perfect score.
  - The student who scored below 36.6 performed less than average.
  - The student who scored below 36.6 cheated.

12. The scores of 50 students in a Math test has a mean of 30, a median of 25 and mode of 20. Which of the following is **TRUE** about the data?
- The average of scores of the students is 30.
  - Majority of the students got scores lower than 10.
  - More students got 30 than 20.
  - All students got perfect score.

For items 13-15, refer to the table below.

The bar graph below shows the number of ads played on different radio station.



13. What radio station has the most number of ads played?
- Classical
  - Country
  - Jazz
  - 80's
14. Which radio station shows the *mean* number of ads played?
- Classical
  - Country
  - Jazz
  - 80's
15. Based on the graph, which of the following statements is true?
- Country and 80's had the greatest number of ads played.
  - No ads were played in jazz.
  - Classical has the least number of ads played.
  - No ads were played in any type of station.

## Lesson

# 1

## Statistical Measures in Analysis and Interpretation of Data



### *What's In*

Previously you have learned the measures of central tendency and variability. Now let us recall some concepts related to our new topic. Identify the terms being described by each of the following statements. You may use the terms repeatedly.

mean

median

mode

range

standard Deviation

variance

- \_\_\_\_\_ 1. The middle number when the data set is arranged in order.
- \_\_\_\_\_ 2. It is the number that occurs most frequently in a set of data.
- \_\_\_\_\_ 3. The difference between the highest value and the lowest value in a data set.
- \_\_\_\_\_ 4. The measure of central tendency commonly referred to as the average.
- \_\_\_\_\_ 5. It refers to the measure of the spread or dispersion of a data set.
- \_\_\_\_\_ 6. The square root of the variance.
- \_\_\_\_\_ 7. A statistical measure that can be used to get the average score of the students in a test.
- \_\_\_\_\_ 8. It can be used when the store manager wants to get his most saleable item.
- \_\_\_\_\_ 9. In the given set of data 2,4,6,8,11, what do you call 6?
- \_\_\_\_\_ 10. It is the average squared distance of all scores that deviates from the mean.



## ***What's New***

Real-life problems in statistics are sometimes difficult to solve. This module will help you analyze and interpret data properly.

Begin with exploring the situation below.

### **“WHICH TASTES BETTER”**

A housewife surveyed canned ham for their consumption. She picked 5 cans each from two boxes packed by company A and company B. The following table shows the following weights in kilogram.

<b>Company A</b>	<b>Company B</b>
4 kg	1 kg
2 kg	4 kg
3 kg	5 kg
4 kg	1 kg
2 kg	4 kg

Help the housewife choose the best sample by doing the following procedure. Write your answers on a separate sheet of paper.

- A. Arrange the weights of canned ham in ascending order.

company A: \_\_\_\_\_ company B: \_\_\_\_\_

- B. Find the mean weight of canned ham in each company.

company A: \_\_\_\_\_ company B: \_\_\_\_\_

- C. Describe the spread of the weights of each company.

company A: \_\_\_\_\_ company B: \_\_\_\_\_

- D. Which company has weights closer to the mean?

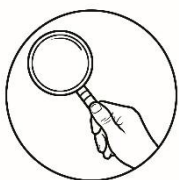
\_\_\_\_\_

- E. If you were to choose from these two companies, which would you prefer? Why?

\_\_\_\_\_

Statistical measures such as measures of central tendency and measures of variability are used to analyze and interpret the set of data.

Consider the problems below and see how and when each statistical measure is used.



## ***What is It***

### **Problem 1**

The table shows the scores of students in a 20-item math test:

<b>Name of Student</b>	<b>Score</b>
Francis	12
Caryll	18
April	15
Fritz	10
Jed	17
Rolph	17
Divine	13
Mark Ben	12
Kaye	18
Charlyn	17
Sarah	16

Determine the appropriate statistical measure to be used to answer each question.

1. If the students will be arranged according to their scores, who will be in the middle?

### ***Solution***

Arrange the scores either from lowest to highest or highest to lowest.

10      12      12      13      15      16      17      17      17      18      18

Then we can see 16 in the middle and we know that it is Sarah's score.

Now, since we did the process of arranging the data and taking the middle element, therefore the statistical measure that we identified was the **median**.

2. What is the score which most of the student got?

**Solution**

Look at the data, we will see that the 17 is the score most student got.

Now, since we took the score which occurred most frequent, therefore the statistical measure that we identified is the **mode**.

3. What is the average score of the eleven students?

**Solution**

Find the average score:  $(10+12+12+13+15+16+17+17+17+18+18) \div 11 = 15$

Now, since we solved for the average by getting the sum of the scores and divide it by the number of students, therefore the statistical measure that we used is **mean**.

4. Are the scores of the students close or spread out? By how much?

**Solution**

Determine how close or spread out the scores are:  $\sqrt{\frac{\sum(x - \bar{x})^2}{N}} = 2.66$ .

This means that the majority of the scores is between  $15 - 2.66$  and  $15 + 2.66$  or  $12.34$  and  $17.66$ .

We solved for the measure of spread or dispersion of the data, in particular we computed the **standard deviation**.

5. Is the highest score far from the lowest score? By how much?

**Solution**

Determine how far is highest score from lowest score:  $18 - 10 = 8$ .

We solved for the difference of the highest and the lowest score, in particular we computed the **range**.

Were you able to understand the uses of statistical measures in our first problem? Good job! If not yet, here's another one for you.

## Problem 2

The following table shows the sales of a school canteen for one week.

Food Item	Price	Number of pieces sold daily					Total Sales
		Monday	Tuesday	Wednesday	Thursday	Friday	
Banana cue	Php 5	20	10	30	5	15	
Fries	Php 10	5	3	10	2	1	
Lumpia	Php 5	30	4	1	20	10	
Popcorn	Php 5	10	10	10	10	10	
Siomai	Php 5	20	15	15	20	25	
Daily income		Php450	Php225	Php380	Php295	Php310	

If you were the canteen manager, what appropriate statistical measure will you use to address each of your concerns below?

1. You want to know what food item is the most saleable for the whole week.

**Hint:** most saleable

Appropriate statistical measure: **mode**

Analysis & Interpretation: **The most saleable food item is Siomai because it has the most number of pieces sold for the whole week.**

2. You want to know the difference between your highest daily income and lowest daily income.

**Hint:** highest daily income minus lowest daily income

Appropriate statistical measure: **range**

Solution:  $\text{Php } 450 - \text{Php } 225 = \text{Php } 225$

Analysis & Interpretation: **The difference between the highest and lowest daily income is Php 225.**

3. You want to know the average daily income.

**Hint:** average daily income

Appropriate statistical measure: **mean**

Solution: 
$$\frac{450+225+380+295+310}{5} = \frac{1660}{5} = 332$$

Analysis & interpretation: **The average daily income is Php 332**

4. You want to know the most inconsistent food item in terms of sales.

**Hint:** inconsistent - it means sometimes very high and sometimes very low, it refers to the spread or dispersion of data.

Appropriate statistical measure: **standard deviation or variance**

Solution:

Food Item	Number of pieces sold daily					mean ( $\mu$ )	standard deviation $\sqrt{\frac{\sum(x_i - \mu)^2}{N}}$
	Monday	Tuesday	Wednesday	Thursday	Friday		
Banana cue	20	10	30	5	15	16	8.6
Fries	5	3	10	2	1	4.2	3.19
Lumpia	30	4	1	20	10	13	10.7
Popcorn	10	10	10	10	10	10	0
Siomai	20	15	15	20	25	19	3.74

Analysis & Interpretation: **The food item with very inconsistent sales is Lumpia because it has the highest standard deviation**

5. You want to know the food item which has neither the highest nor the lowest sales.

Hint: neither highest nor lowest - it means the data in the middle.

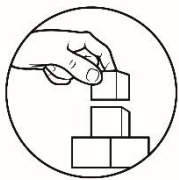
Appropriate statistical measure: **median**

Solution: Arrange the food items according to total sales and identify middle item.

Total sales	Php210	Php250	Php325	Php400	Php475
Food item	Fries	Popcorn	Lumpia	Banana cue	Siomai

Analysis & Interpretation: **The food item which has even sales is Lumpia.**

Did you understand the lesson? Do you now know what appropriate statistical measure will you use to analyze and interpret the statistical data? To reinforce your understanding do the following activity.



## What's More

Determine the appropriate statistical measure to be used and analyze the statistical data. Write your answer on a separate answer sheet.

For numbers 1 to 5, refer to the table below.

The table shows the grades of the students in 5 subject areas.

Student's Name	Math	English	Science	Social Studies	Filipino
Ann	95	90	93	90	92
Benj	96	86	80	81	82
Cris	81	90	85	78	80

Let us determine the appropriate Statistical Measure to be used in order to answer the following questions on a separate answer sheet.

### Question

### Statistical Measure

1. What is the average grade of each student?
2. What is the grade did most of the students have?
3. Are the grades of Benj close or spread out?
4. If the students will be ranked according to their average grade, who will be in the middle?
5. What is the difference between Cris' highest grade and lowest grade?

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For numbers 6 to 10, refer to the following sales of cellphone brands for the first quarter of the year. Write your answer on a separate answer sheet.

	January	February	March
<b>Samsung</b>	20	12	17
<b>iPhone</b>	15	25	5
<b>Huawei</b>	14	12	13

If you were the store manager, analyze and interpret the data using the appropriate statistical measure.

6. What cellphone brand has the most sales?

Statistical measure: \_\_\_\_\_

Analysis & interpretation:

---

7. What is the average sale of iPhone for the three months?

Statistical measure: \_\_\_\_\_

Analysis & interpretation:

---

8. Are the sales of Huawei for three months close or spread out?

Statistical measure: \_\_\_\_\_

Analysis & interpretation:

---

9. By how much is the highest sale of Samsung differ from its lowest sale?

Statistical measure: \_\_\_\_\_

Analysis & Interpretation:

---

10. If the data will be arranged from highest sale to lowest sale, combining all brands, what value will be in the middle?

Statistical measure: \_\_\_\_\_

Analysis & Interpretation:

---



## ***What I Have Learned***

Based on your understanding of the lesson, complete the following sentences. Write your answer on a separate answer sheet.

1. The statistical measures discussed in analyzing and interpreting data were:

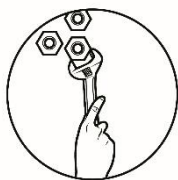
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.

2. The \_\_\_\_\_ is the value that appeared the most in a set of data.

3. The \_\_\_\_\_ is the middle value in a set of data.

4. To know how close or spread out the data set is, we use the \_\_\_\_\_.

5. To know how much the highest value differ from the lowest value of the data set, we compute for the \_\_\_\_\_.



## ***What I Can Do***

Since you have already learned how to use appropriate statistical measure in analyzing and interpreting statistical data, then you are now ready to apply your learning into a real-life situation.

A. Suppose you are a researcher, make a survey in any one of the following subjects below.

- a. Favorite social network icon of your siblings and cousins.
- b. The kind of snacks you and your siblings or friends have while answering your modules.
- c. Household chores you and your siblings or friends do after answering your modules.

B. Organize your data in a frequency distribution table. (You may add more rows in your table)

(Item according to your chosen topic)	Tally	Frequency

C. Determine the appropriate statistical measure to be used in analyzing and interpreting the following:

1. The item that occurred most frequently in your data.

Statistical measure: \_\_\_\_\_

Analysis & interpretation:

---

2. Are the frequencies in your data close or spread out?

Statistical measure: \_\_\_\_\_

Analysis & Interpretation:

---

3. If you will arrange your data from the item with highest frequency to that of with the lowest frequency, what item will be in the middle?

Statistical measure: \_\_\_\_\_

Analysis & Interpretation:

---

**Lesson****2****Drawing Conclusions from Statistical Data*****What's In***

In your previous lesson, you have learned how to analyze and interpret data using appropriate statistical measures. Now recall the previous concepts.

Shown below is a list of students and their heights. Analyze and interpret the data using statistical measures. Write your answer in a separate answer sheet.

**Name                  Height (cm)**

Kyle                  150

Dominic            140

Chloe                160

**Name                  Height (cm)**

Ethan                145

Ked                   160

1. Arrange the students from shortest to tallest and identify the one in the middle of the arranged heights.

Statistical measure: \_\_\_\_\_

Analysis & interpretation: \_\_\_\_\_

2. Are there students who has equal heights? What is their height?

Statistical measure: \_\_\_\_\_

Analysis & interpretation: \_\_\_\_\_

3. Describe the students in terms of their height.

Statistical measure: \_\_\_\_\_

Analysis & interpretation: \_\_\_\_\_

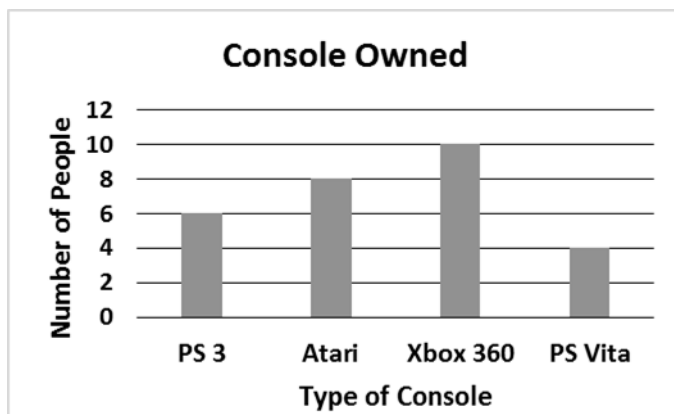


## ***What's New***

Sometimes we're able to analyze and interpret data but to draw correct conclusion is a struggle.

Here's a thorough discussion of how to draw conclusion from statistical data. Begin with interpreting the example given.

A game company asked people at the mall which game console they owned. They recorded the results in the bar graph below.



Determine if each statement below is TRUE or FALSE.

- \_\_\_\_\_ 1. The Xbox 360 is owned by most people.
- \_\_\_\_\_ 2. More people owned PS Vita than Atari
- \_\_\_\_\_ 3. PS 3 is least owned.
- \_\_\_\_\_ 4. Lesser people owned PS Vita than PS 3
- \_\_\_\_\_ 5. The same number of people owned the different consoles.



## What is It

Drawing conclusion must be based on the data observed and should address what is being asked.

Here are some examples.

**Problem 1:** Consider the scores of two sets of students in a 20-item quiz in Mathematics. How do the scores in two sets differ?

Set A	16, 18, 16, 14, 17, 18, 19, 16, 17, 19
Set B	6, 14, 5, 3, 19, 7, 6, 13, 7, 20

**Possible Conclusions:**

- ✓ The scores in set A are higher than the scores in set B.
- ✓ The scores in set A are very close while the scores in set B are spread out.
- ✓ The students in set A have almost the same abilities and therefore more teachable and would progress at the same rate.
- ✓ Set B is a combination of slow learners and fast learners. They are more difficult to manage since they don't have the same mental abilities.

**Problem 2:** The grades of the two students in their 5 subjects were given through the measures of central tendencies. Draw some conclusions based on the data below.

Student	Mean	Median	Mode
Ivy	86	85	83
Laila	92	93	90

**Possible Conclusions:**

- ✓ Since the measures of central tendency of Ivy's grade are lesser than that of Laila's, then we can say that Ivy got lower grades than Laila.
- ✓ The data shows that Laila's academic achievement is higher than that of Ivy's. Thus, we can say that Laila performed better than Ivy.

**Problem 3:** According to 2020 census of a particular municipality, the result of the ages of in-school children are as follows:

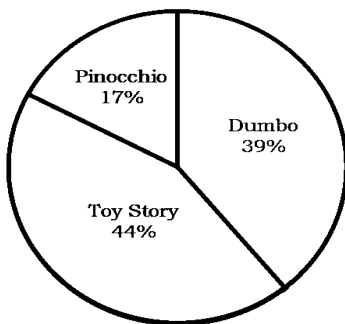
Barangay	Variance	Standard Deviation
Barangay 1	12.25	3.5
Barangay 2	2.3	1.52

**Possible Conclusions:**

- ✓ Since the measures of variability of Barangay 1 is higher than that of Barangay 2, then we can say that the ages of in-school children in Barangay 1 are more spread out.
- ✓ The data shows that in-school children in Barangay 1 have different ages, while in-school children in Barangay 2 have almost the same ages.

**Problem 4:** The graph below shows the Favorite Disney movie of kids. Draw some possible conclusions.

**Favorite Disney Movie**

**Possible Conclusions:**

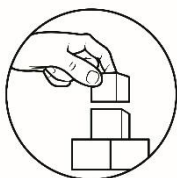
- ✓ The most favorite Disney movie is Toy Story.
- ✓ The least favorite Disney Movie is Pinocchio.

**Problem 5:** The graph below shows the number of hours Annie Moore worked each day of the week.

**Possible Conclusions:**

- ✓ Annie worked the most during Thursday.
- ✓ During Monday, Annie does more rest or recreation.
- ✓ Annie worked two more hours in Thursday than Wednesday.

Do you now know how to draw conclusions from a statistical data? Great! Now it's your turn! Answer the following in a separate answer sheet.



## What's More

Draw some conclusions from the statistical data given. Write your answer on a separate sheet of paper.

1. The scores of two students in their quizzes were presented using the measures of central tendency. How do their scores differ?

Student	Mean	Median	Mode
Helina	13	12	5
Susana	21	23	23

Possible Conclusions:

- ✓ \_\_\_\_\_
- ✓ \_\_\_\_\_

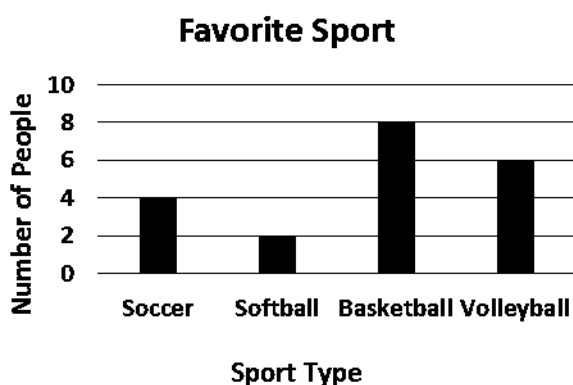
2. The table shows the sales of shoes of the two malls in a week. Describe the difference of their sales.

Mall	Sales of Shoes in a week
Mall 1	2, 20, 3, 5, 25, 8, 22
Mall 2	19, 23, 24, 20, 24, 24, 18

Possible Conclusions:

- ✓ \_\_\_\_\_
- ✓ \_\_\_\_\_

3. Presented in the graph is a result of a survey about people's favorite sport. Draw some conclusions from the data.



Possible Conclusions:

- ✓ \_\_\_\_\_
- ✓ \_\_\_\_\_

4. According to 2020 census of a particular province, the birth rate of two municipalities for the past 3 years were presented by the measures of variability.

Barangay	Variance	Standard Deviation
Municipality 1	17.64	4.2
Municipality 2	1.32	1.15

Possible Conclusions:

- ✓ \_\_\_\_\_
- ✓ \_\_\_\_\_

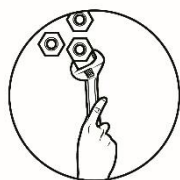


## ***What I Have Learned***

Would you like to find out how much you have learned from this module?

Complete the following sentences on a separate answer sheet based on your understanding of the lesson.

1. If the standard deviation is high, it means that the data are \_\_\_\_\_.
2. The smaller the standard deviation is, the \_\_\_\_\_ the data.
3. If you got the highest percentage in election in a pie graph, it means that you \_\_\_\_\_ the election.
4. If two students have the same \_\_\_\_\_, it implies that both students have the same performance.
5. The students who got scores below the \_\_\_\_\_, did not perform well in the examination.



## ***What I Can Do***

Here is an activity that lets you apply what you have learned about our lesson.

- A. Do an interview/survey on any one of the following topics below. Record and present your data using any of the bar graph, line graph, pie chart, pictograph.
  - a. The favorite snack of your cousins or kids around you.
  - b. The number of hours you spent in answering your module per subject.
  - c. The internet provider you and your neighbors use.
- B. Draw at least two conclusions from the data you have gathered.



## Assessment

Choose the letter of the best answer. Write the chosen letter on a separate answer sheet.

- What measure is equal to 5 in the data set: 5, 15, 5, 20, 30, 25, 5, 10, 5, 15?
  - mean
  - median
  - mode
  - range
- What measure is equal to 2 in the following scores: 0, 1, 2, 2, 3, 4, 5?
  - mean
  - median
  - median and mode
  - mean and median
- The temperatures of some areas were as follows: 29°C, 32°C, 29°C, 30°C, What measure is equal to 30°C?
  - mean
  - median
  - median and mode
  - mean and median
- The scores of the contestants were arranged from lowest to highest and it was found out that the middle score is 35. What measure of central tendency is 35?
  - mean
  - median
  - mode
  - range
- The frontliners' heart rate was monitored. The result shows that average heart rate is 75bpm and the standard deviation is 0.5. Which statement is TRUE?
  - The mean heart rate is 7.5bpm
  - The heart rate of frontliners are too different from each other.
  - The standard deviation shows that the heart rates are too close to each other.
  - All heart rates are equal.

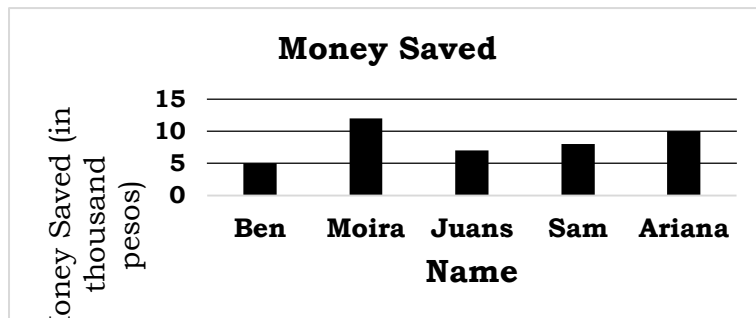
For items 6-8, refer to the table below.

The barangay SK held a Mobile Legend Tournament and awarded the top 3 teams. The team's scores in each round are shown below.

Team	Game 1	Game 2	Game 3
Griffindor	85	86	91
Slytherin	92	89	90
Imperius	95	90	89

- You want to know the average score in three games of each team. What statistical measure will you use?
  - mean
  - median
  - mode
  - variance/standard deviation

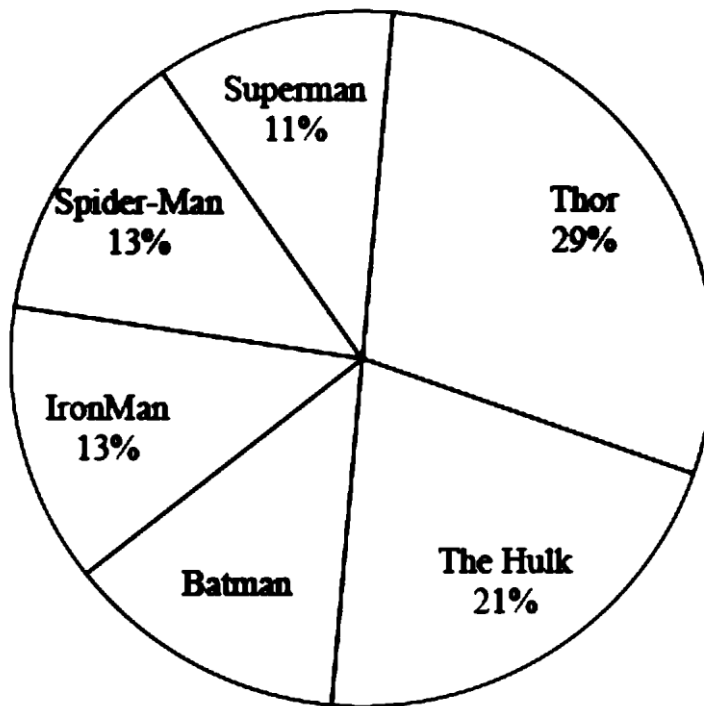
7. What statistical measure will you use to know the difference between the highest and the lowest score?
- mean
  - median
  - mode
  - range
8. If you were to rank the three teams, what statistical measure will determine the middle team?
- mean
  - median
  - mode
  - variance/standard deviation
9. Kyle manages a cellphone center. He wanted to know what cellphone brand is most saleable. What measure of central tendency will be appropriate to use?
- mean
  - median
  - mode
  - variance/standard deviation
10. The mean score of 50 students in a quiz is 41.5. What does it mean when a student scored above 41.5?
- The student who scored above 41.5 did better than average.
  - The student who scored above 41.5 got a failing score.
  - The student who scored above 41.5 did not perform well
  - The student who scored above 41.5 cheated.
11. The scores of 20 students in a 30-item Science test has a mean of 25, a median of 25 and mode of 25. Which is **TRUE** about the data?
- The average of scores of the students is 20.
  - Majority of the students got 25.
  - More students got 20 than 25.
  - All students got perfect score.
12. The bar graph below shows the money saved by a group of friends. Based on the graph, which of the following statements is TRUE?



- Juans and Sam have the same money saved.
- Moira has the most money saved.
- Ariana has more money saved than Moira.
- They all have the same amount of money saved.

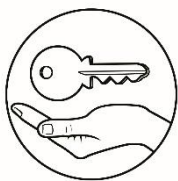
For items 13-15, refer to the pie chart below.

## **Favorite Superhero**



The pie chart shows the favorite superheroes of the kids.

13. Which superhero is the most favorite?
  - a. IronMan
  - b. Spider-Man
  - c. Superman
  - d. Thor
14. Which superhero is the least favorite?
  - a. IronMan
  - b. Spider-Man
  - c. Superman
  - d. Thor
15. Which statement is TRUE about the pie chart?
  - a. There is an extreme high and extreme low data.
  - b. The mean of the data is zero
  - c. All superheroes have equal share in the pie.
  - d. The pie shows that the data are slightly close to each other.



## Answer Key

<p><b>What I Know</b></p> <ol style="list-style-type: none"> <li>1. C</li> <li>2. C</li> <li>3. D</li> <li>4. C</li> <li>5. D</li> <li>6. A</li> <li>7. C</li> <li>8. A</li> <li>9. D</li> <li>10. C</li> <li>11. C</li> <li>12. A</li> <li>13. C</li> <li>14. B</li> <li>15. C</li> </ol>	<p><b>Lesson 1: What's In</b></p> <p>A.</p> <ol style="list-style-type: none"> <li>1. Median</li> <li>2. Mode</li> <li>3. Range</li> <li>4. Mean</li> <li>5. Variance/Standard Deviation</li> <li>6. Standard Deviation</li> <li>7. Mean</li> <li>8. Mode</li> <li>9. Median</li> <li>10. Standard Deviation</li> </ol>	<p><b>Lesson 1: What's More</b></p> <ol style="list-style-type: none"> <li>1. Mean</li> <li>2. Mode</li> <li>3. Variance/Standard Deviation</li> <li>4. Median</li> <li>5. Range</li> <li>6. Mode, Samsung has the most sales.</li> <li>7. Mean, Iphone has an average sale of 15.</li> <li>8. Variance/Sd, The sales of Huawei every month is almost the same.</li> <li>9. Range, Samsung sales has a range of 8.</li> <li>10. Median, 14 will be in the middle.</li> </ol>
<p><b>Lesson 1: What I have Learned</b></p> <ol style="list-style-type: none"> <li>1. Mean, Median, Mode, Range, Variance, Standard Deviation</li> <li>2. Mode</li> <li>3. Median</li> <li>4. Variance/Standard Deviation</li> <li>5. Range</li> </ol>	<p><b>Lesson 2: What's In</b></p> <ol style="list-style-type: none"> <li>1. Median, Kyle will be standing in the middle.</li> <li>2. Mode, There will be two students standing in same 160cm height.</li> <li>3. Variance/ Standard Deviation, The students' height are bit close to each other.</li> </ol>	<p><b>Lesson 2: What's New</b></p> <ol style="list-style-type: none"> <li>1. TRUE</li> <li>2. FALSE</li> <li>3. FALSE</li> <li>4. TRUE</li> <li>5. FALSE</li> </ol>

Assessment

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

Lesson 2:  
What I have  
Learned

1. scattered/spread  
2. closer  
3. win  
4. mean  
5. mean

Lesson 2:  
What's More

1. ✓ Susana performed better than Helina.  
✓ Helina might not understand their lesson well.  
2. ✓ Mall 1 had inconsistent sales.  
✓ Mall 2 had better sales.  
3. ✓ Basketball is the most favorite sport of the people while softball is the least favorite. People like volleyball more than soccer.  
4. ✓ Municipality 1 had inconsistent number of babies born for 3 years.  
✓ Municipality 2 had almost the same numbers of babies born for 3 years.

## **References**

Oronce, O., & Mendoza, M. (2015). *E-MATH 7, Revised Edition*. Manila: Rex Book Store, Inc.

*www.slideshare.net*, GRADE 7 MATHEMATICS LEARNING GUIDE. pp. 63-68.  
<https://www.slideshare.net/lhoralight/k-to-12-grade-7-learning-material-in-mathematics-q4>

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