

Summative Assessment #2 for Outer Space and Cyber Space

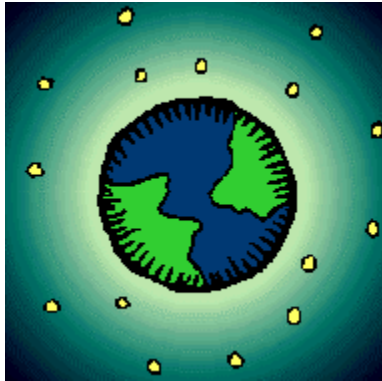


Table of Contents

Item	Page
Our Planets Aren't Average, Summative Assessment #2 Instructions	page 2
Our Planets Aren't Average, Summative Assessment #2	page 3 – 4
Our Planets Aren't Average, Summative Assessment #2 Teacher Key	page 5

Our Planets Aren't Average
Summative Assessment #2
Constructed Response, Selected Response

Duration: 45 minutes

Standards Assessed: MA.E.1.2.2.4.1, MA.E.1.2.2.4.2, MA.E.1.2.3.4.1

Description of Assessment Activity: Students show that they have an understanding of median, mode, mean, and range by completing various activities from the assessment. A line graph is used to determine the range and a calculator is used to determine the range and mean. Students select the correct answer, explain their answer, and construct the correct answer to the questions presented. Two of the three sets of data used are from the Planet Characteristics Data Chart.

Teacher Directions: Download the assessment tool and duplicate for each student. Students **should** have access to the wall data chart or their individual data charts for this activity. All data they will be using is provided on the assessment tool, however they may want to check some numbers. Students are to complete the assessment tool unassisted except where specific modifications are in place for individual students. This is a graded activity and should be recorded.

Student Directions: Read the directions carefully and complete each part of the assessment. You may use the data wall chart or your own data chart if you are not sure of a number to use, however all data you will need is on the assessment. You will need your calculator and may use it at any time you wish. You have 45 minutes to complete the assessment. When finished, proofread your paper, and then turn it in.

Scoring Method and Criteria: A teacher's key has been provided with this assessment. There are 16 possible points with each question being worth one point. This assessment should be scored on a % correct basis.

Name _____

Date _____

Our Planets Aren't Average

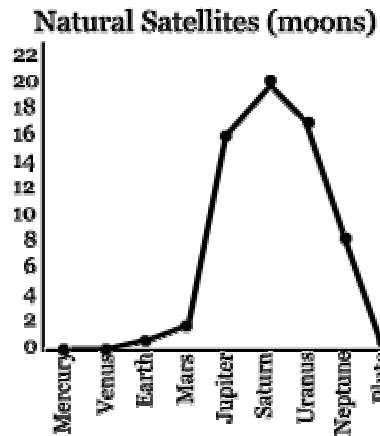
Summative Assessment #2

Look at these numbers. Select the correct answer to each question.
Then, tell how you found your answer.

6 5 2 1 2 4 6 8 2

<p>What is the median of the numbers above?</p> <ul style="list-style-type: none"><input type="radio"/> A. 6<input type="radio"/> B. 4<input type="radio"/> C. 2<input type="radio"/> D. 5 <p>What did you do to find the median?</p>	<p>What is the mode of the numbers above?</p> <ul style="list-style-type: none"><input type="radio"/> A. 6<input type="radio"/> B. 4<input type="radio"/> C. 2<input type="radio"/> D. 5 <p>What did you do to find the mode?</p>
<p>What is the mean of the numbers above? <i>(Use a calculator.)</i></p> <ul style="list-style-type: none"><input type="radio"/> A. 6<input type="radio"/> B. 4<input type="radio"/> C. 2<input type="radio"/> D. 5 <p>What did you do to find the mean?</p>	<p>What is the range of the numbers above? <i>(Use a calculator.)</i></p> <ul style="list-style-type: none"><input type="radio"/> A. 1<input type="radio"/> B. 3<input type="radio"/> C. 7<input type="radio"/> D. 5 <p>What did you do to find the range?</p>

Use the line graph showing the number of natural satellites that each planet has to find the **median**, **mode**, **mean**, and **range**.



Median = _____

Use this space to figure your answers.

Mode = _____

Use a *calculator* to figure the following:

Mean = _____

Range = _____

This chart shows the number of rings for each planet.

Use the chart, numbers, and your *calculator* to find the **medium**, **mode**, **mean**, and **range**.

Number of Rings								
Mercury	Venus	Earth	Mars	Jupiter	Saturn	Uranus	Neptune	Pluto
0	0	0	0	1	100,000	9	5	0

Median = _____

Use this space to figure your answers.

Mode = _____

Use a *calculator* to figure the following:

Mean = _____

Range = _____

(MA.E.1.2.2.4.1, MA.E.1.2.2.4.2, MA.E.1.2.3.4.1)

Name _____

Date _____

Our Planets Aren't Average

Summative Assessment #2

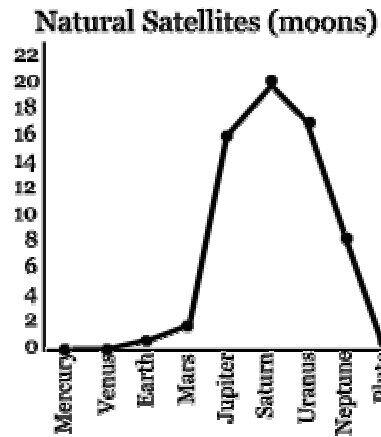
Teacher Key

Look at these numbers. Select the correct answer to each question.
Then, tell how you found your answer.

6 5 2 1 2 4 6 8 2

<p>What is the median?</p> <p><input type="radio"/> B. 4</p> <p>What did you do to find the median?</p> <p>Accept any accurate description of the process used to find the median.</p> <p>Possible answers include:</p> <ol style="list-style-type: none">2. I wrote the numbers in order and marked off one on each end until I found the one in the middle.3. I crossed off the numbers on each end of the number line and found the middle.	<p>What is the mode?</p> <p><input type="radio"/> C. 2</p> <p>What did you do to find the mode?</p> <p>Accept any accurate description of the process used to find the mode. Possible answers include:</p> <ol style="list-style-type: none">1. I could see that there are more 2s than any other number.2. I counted how many times each number was there.
<p>What is the mean? (<i>Use a calculator.</i>)</p> <p><input type="radio"/> B. 4</p> <p>What did you do to find the mean?</p> <p>Accept any accurate description of the process used to find the mean. Possible answers include:</p> <ol style="list-style-type: none">1. I added all the numbers and divided by how many numbers there are.2. I divided 36/9.	<p>What is the range? (<i>Use a calculator.</i>)</p> <p><input type="radio"/> C. 7</p> <p>What did you do to find the range?</p> <p>Accept any accurate description of the process used to find the median.</p> <p>Possible answers include:</p> <ol style="list-style-type: none">1. I subtracted 8 – 1 because 8 is the highest and 1 is the lowest.2. I subtracted the lowest number from the highest number.

Use the line graph showing the number of natural satellites that each planet has to find the **median**, **mode**, **mean**, and **range**.



Median = **2**

Mode = **0 and 1**

Use a *calculator* to figure the following:

Mean = **7.22**

Range = **20**

Use this space to figure your answers.

Total = 65

Median = 2 (it is in the middle)

Mode = 0 and 1

Mean $65/9 = 7.22$

Range = $20 - 0 = 20$

This chart shows the number of rings for each planet.

Use the chart, numbers, and your *calculator* to find the **medium**, **mode**, **mean**, and **range**.

Number of Rings								
Mercury	Venus	Earth	Mars	Jupiter	Saturn	Uranus	Neptune	Pluto
0	0	0	0	1	100,000	9	5	0

Median = **7**

Mode = **0**

Use a *calculator* to figure the following:

Mean = **11,112.777**

Range = **100,000**
(MA.E.1.2.2.4.1, MA.E.1.2.2.4.2, MA.E.1.2.3.4.1)

Use this space to figure your answers.

Total = 100,015

Median = $9+5/2 = 7$

Mode = 0 is present the most

Mean = $100,015/9 = 11,112.777$

Range = $100,000 - 0 = 100,000$