Week 9 Assignment 9

1. A study follows residents of a neighboring city, who are exposed to the same gas. The daily concentration of the gas is given in the following table:

<table>
<thead>
<tr>
<th>Day</th>
<th>Gas Concentration (parts per million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

a. What is the average concentration of the gas over the four days?

b. What is the median concentration of the gas over the four days?

c. What is the range of the gas concentrations over the four days?

2. Take the following sequence as a hypothesis and write your conclusion:

<table>
<thead>
<tr>
<th>Index</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
</tr>
</tbody>
</table>

a. The sequence is arithmetic.

b. The sequence is geometric.

c. The sequence is neither arithmetic nor geometric.

3. What is the following statement as a more or less written form?

- It is raining.

4. Why is it important to be familiar with your data?

- Data can be used to make informed decisions and solve problems.
- Data can be used to support arguments and influence opinions.
- Data can be used to create visual representations.

5. Why is it important to be familiar with your data?

- Data can be used to make informed decisions and solve problems.
- Data can be used to support arguments and influence opinions.
- Data can be used to create visual representations.

6. What is the output of a function?

- The input value.
- The output value.
- The function itself.

7. What is the primary difference between a function and a relation?

- A function is a specific type of relation.
- A relation is a specific type of function.
- A function is a set of ordered pairs.
- A relation is a set of ordered pairs.

8. What is the domain of a function?

- The set of all possible input values.
- The set of all possible output values.
- The set of all possible relations.

9. What is the range of a function?

- The set of all possible input values.
- The set of all possible output values.
- The set of all possible relations.

10. What is the difference between discrete and continuous data?

- Discrete data consists of distinct, isolated values.
- Continuous data consists of values that can take on any value within a range.
- Discrete data can be measured, while continuous data cannot.

11. What is the difference between discrete and continuous data?

- Discrete data consists of distinct, isolated values.
- Continuous data consists of values that can take on any value within a range.
- Discrete data can be measured, while continuous data cannot.

12. What is the difference between discrete and continuous data?

- Discrete data consists of distinct, isolated values.
- Continuous data consists of values that can take on any value within a range.
- Discrete data can be measured, while continuous data cannot.

13. What is the difference between discrete and continuous data?

- Discrete data consists of distinct, isolated values.
- Continuous data consists of values that can take on any value within a range.
- Discrete data can be measured, while continuous data cannot.