Unit 06-02 Quiz

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. Two different gas stations below list the price per gallon of gasoline over 5 days.

<table>
<thead>
<tr>
<th>Day</th>
<th>Gas Plus</th>
<th>Go Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>$2.50</td>
<td>$2.48</td>
</tr>
<tr>
<td>Tuesday</td>
<td>$2.51</td>
<td>$2.56</td>
</tr>
<tr>
<td>Wednesday</td>
<td>$2.52</td>
<td>$2.46</td>
</tr>
<tr>
<td>Thursday</td>
<td>$2.57</td>
<td>$2.59</td>
</tr>
<tr>
<td>Friday</td>
<td>$2.55</td>
<td>$2.44</td>
</tr>
</tbody>
</table>

Which gas station has more variation based on their range?

a. ‘Gas Plus’ has more variation
b. ‘Go Station’ has more variation
c. The two gas stations have the same variation
d. There isn’t enough information to determine the variation.

2. Consider the following unorganized data set:

12, 15, 8, 29, 30, 27, 19, 12

What is the first quartile ($Q_1$) of the data set?

a. 8
b. 12
c. 17
d. 28

3. Consider the following unorganized data set:

12, 15, 8, 29, 30, 27, 19, 12

What is the Inner Quartile Range (IQR) of the data set?

a. 12
b. 16
c. 17
d. 28
4. Consider the data set:

60, 44, 56, 52, 48

<table>
<thead>
<tr>
<th>Data Points (x)</th>
<th>Mean ((\bar{x}))</th>
<th>Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>52</td>
<td>8</td>
</tr>
<tr>
<td>44</td>
<td>52</td>
<td>-8</td>
</tr>
<tr>
<td>56</td>
<td>52</td>
<td>4</td>
</tr>
<tr>
<td>52</td>
<td>52</td>
<td>0</td>
</tr>
<tr>
<td>48</td>
<td>52</td>
<td>-4</td>
</tr>
</tbody>
</table>

What is the mean absolute deviation of the data set (use the table for help)?

a. 0  

b. 4  

c. 4.8  

d. 8

5. Consider the data set:

5, 9, 11, 17, 23

The data set has a mean deviation of 5.6. If you were to double every number in the data set and recalculate the mean deviation, what would it be?

a. 5.6  

b. 7.6  

c. 11.2  

d. 12.1

6. Consider the data set:

12, 10, 1, 8, 4

<table>
<thead>
<tr>
<th>Data Points (x)</th>
<th>Mean ((\bar{x}))</th>
<th>Deviation</th>
<th>(Deviation)^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>7</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>10</td>
<td>7</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>-6</td>
<td>36</td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>-3</td>
<td>9</td>
</tr>
</tbody>
</table>

What is the standard deviation of the data set (use the table for help)?

a. 0.00  

b. 3.60  

c. 4.00  

d. 4.47

7. Consider the data set:

23, 1, 5, 14, 17

The data set has a standard deviation of 8. If you were to add 3 to every number in the data set and recalculate the standard deviation, what would it be?

a. 8  

b. 5  

c. 11  

d. 23