**QPOEE Quiz #2** over Mean, Median, Mode, Range, Outlier

Success Criteria: Communicate patterns in data using mean, median, mode, range, outliers, etc.

**Directions:** Calculate the mean, median, mode, range, and outlier of the data collected for bean plant height, in centimeters:

10 cm, 12 cm, 13 cm, 6 cm, 10 cm, 33 cm, 12 cm, 3 cm, 7 cm, 12 cm, 3 cm, 11 cm

<table>
<thead>
<tr>
<th>Using the data, above, explain or show how you found each answer.</th>
<th>Your answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1 point each)</td>
<td>(1 point each)</td>
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</table>
| 1.) Show how you found the **mean** of the set of data, above?  
$10 + 12 + 13 + 5 + 11 + 33 + 12 + 3 + 7 + 12 + 3 + 11$  
$= 132 ÷ 12 = 11$ | **mean** → 2.) **11 cm**  
Did you remember to label your answer? |
| 3.) How did you find the **median** of the data, above?  
3, 3, 6, 7, (10, 11), 12, 12, 12, 13, 33  
$10 + 11 = 21 ÷ 2 = 10.5$ | **median** → 4.) **10.5 cm** |
| 5.) Using WORDS, describe how you found the **mode** of the data, above?  
**Twelve occurs 3 times, which is more than any other number shows up in this set of data** | **mode** → 6.) **12 cm** |
| 7.) How did you find the **range** of the data, above?  
33 ← highest value  
-3 ← lowest value  
30 ← difference | **range** → 8.) **30 cm** |

Does this data have an **outlier**? Circle yes or no, in the box to the right.

**outlier** → 10.) **Yes**  
If so, what is it? **33 cm**  
If not, leave answer blank.

9.) Explain your reasoning.

33 is unlike any other value in this set of data
Directions: Read the definition and write the vocabulary term that it describes next to it, on the right, below.

<table>
<thead>
<tr>
<th>Definition</th>
<th>Vocabulary Term</th>
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<tbody>
<tr>
<td>The numbers that ‘lie outside’ most of the other values in the set.</td>
<td>11. outlier</td>
</tr>
<tr>
<td>The middle value of the data in numerical order.</td>
<td>12. median</td>
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<tr>
<td>The difference between the largest and smallest values from the data.</td>
<td>13. range</td>
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<tr>
<td>The numerical value that occurs most often in the data.</td>
<td>14. mode</td>
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<tr>
<td>The average of all of the data collected.</td>
<td>15. mean</td>
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</table>