

Name: \_\_\_\_\_

## **Create a Bivariate Bar Graph Using Authentic Collected Data**

### **Directions:**

1. On graph paper, **create a table** with categories that represent your Level 2 and Level 3 raw score for each attempt.
  
2. On another piece of graph paper, **create a bivariate bar graph** representing the data that you organized in your chart. Refer to the example provided for guidance.
  - a. Include the following components:
    - i. Title
    - ii. Label x-axis and y-axis
    - iii. “Raw Score” on the Y-Axis and ‘Attempts” on the X-axis
    - iv. Space the raw scores and attempts equidistant from one another on the X and Y axis.
    - v. Give your graph a title
    - vi. Include a key for your graph
    - vii. Use color that reflects the key
    - viii. Use a ruler to make each bar neatly and evenly spaced

### **3. Interpret Your Graph**

- a. What does your graph tell you about your multiplication fluency skills? Explain how your graph supports your conclusion.

**Attempt #1**

Multiplication Fact Monster Score Report:

Level 2: \_\_\_\_\_ Correct

Level 3: \_\_\_\_\_ Correct

**Attempt #2**

Multiplication Fact Monster Score Report:

Level 2: \_\_\_\_\_ Correct

Level 3: \_\_\_\_\_ Correct

**Attempt #3**

Multiplication Fact Monster Score Report:

Level 2: \_\_\_\_\_ Correct

Level 3: \_\_\_\_\_ Correct

**Attempt #4**

Multiplication Fact Monster Score Report:

Level 2: \_\_\_\_\_ Correct

Level 3: \_\_\_\_\_ Correct

**Attempt #5**

Multiplication Fact Monster Score Report:

Level 2: \_\_\_\_\_ Correct

Level 3: \_\_\_\_\_ Correct

**Attempt #6**

Multiplication Fact Monster Score Report:

Level 2: \_\_\_\_\_ Correct

Level 3: \_\_\_\_\_ Correct

**Attempt #7**

Multiplication Fact Monster Score Report:

Level 2: \_\_\_\_\_ Correct

Level 3: \_\_\_\_\_ Correct

**Attempt #8**

Multiplication Fact Monster Score Report:

Level 2: \_\_\_\_\_ Correct

Level 3: \_\_\_\_\_ Correct

## Rubric

	3 points	2 points	1 point	0 points
<b>Table</b>	Table includes raw scores from 8 attempts at Level 2 and 8 attempts at Level 3. It shows each attempt and the corresponding scores clearly.	Table includes raw scores from attempts at Level 2 and Level 3 but is fewer than 8. It shows each attempt and the corresponding scores clearly.	Table includes raw scores from only Level 2 or Level 3. The information is not organized clearly.	Table is missing.
<b>Graph Labels</b>	Title, key, axis labels, axis titles, and well spaced scores are present on the graph	Most components of the graph labels are present (3 or more)	Few components of the graph labels are present (1 or more)	No graph labels are present.
<b>Visuals</b>	Color is used. A ruler has been used. Graph paper has been used for spacing. Labels are neat and easy to read.	Most visual components are present (2-3)	Few visual components are used (1)	No visual components are used.
<b>Graph Interpretation (Data Analysis)</b>	<p>The student has written a clear and accurate interpretation based on the data provided in their graph.</p> <p><u>Example:</u> The bars for level 2 are higher than the bars for level 3. This tells me that I was more fluent with the facts presented in level 2, which were easier and less fluent with the facts presented in level 3, which were more challenging.</p>	<p>The student has written an interpretation related to their graph but it is not a conclusion that shows they've interpreted the data.</p> <p><u>Example:</u> The level 2 lines are higher on my graph. – This is an observation, but is not a meaningful observation.</p>	<p>The student has written an interpretation that does not relate to their graph.</p> <p><u>Example:</u> The graphs have 2 pieces of information on them at the same time. – This is a general statement about the activity, not an analysis of the student's personal work.</p>	The student has not written an interpretation.

Total Score: \_\_\_\_\_/12