**Task One: Compare and Predict**

The following chart shows sample data from a team of researchers testing the impact of differing amount of Mentos on the height of the soda stream.

Is this investigation an experiment or a systematic observation?

The independent variable (\_\_\_\_\_- axis) in this investigation is:

The dependent variable (\_\_\_\_\_- axis) in this investigation is:

|  |  |
| --- | --- |
| # Mentos | Height (cm) |
| 1 | 7 |
| 2 | 23 |
| 3 | 39 |
| 4 | 55 |
| 5 | 71 |
| 6 | 87 |
| 7 | 103 |
| 8 | 119 |
| 9 | 135 |
| 10 | 151 |

**Your Task:** Predict how high the soda stream will be if 100 Mentos are used.

**Task Two: Explain Why**

During this task, it is important to remember that gaseous molecules have mass. In a carbonated beverage like Diet Coke, Carbon Dioxide molecules are dissolved into the liquid (like Oxygen in a fish tank).

**Your Task:** Explain why dropping the Mentos in the Diet Coke caused the result it did. Keep in mind that you do not have very much data to support your idea at this point, so it may not be exactly correct, and that is okay. However, your explanation must take into account ALL data available to you. If your explanation cannot account for one or two data points, it is invalid.

Next, describe any additional tests (at *least* two, but preferably more) that would produce data to support your explanation. Briefly describe each test, and the results that would support your existing explanation.