**Hartford Precipitation**

A function is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between two sets, a first set and a second set, where each element from the first set is paired with *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* element from the second set.

The values we use for the first set are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and are the same as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variable. The values in the second set are often called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and are the same as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variable.

The set of all possible inputs is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the function.

The set of all possible outputs is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of the function.

When we present a relation in a table the left column always contains the inputs, also called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The dependent variable is always in the right column.

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| 1. Look at Table 1 below. Does the data in the table describe a function? Why or why not?

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| **Table 1**Average Precipitation for Hartford, Connecticut |
| **Month** | **Inches** |
| 1 | 3.66 |
| 2 | 2.65 |
| 3 | 3.61 |
| 4 | 3.82 |
| 5 | 3.99 |
| 6 | 3.83 |
| 7 | 3.93 |
| 8 | 3.83 |
| 9 | 3.83 |
| 10 | 3.91 |
| 11 | 3.79 |
| 12 | 3.44 |

 | 1. The independent variable is:
2. The dependent variable is:
3. Plot the data on the graph below.

 C:\Users\TRAVEL\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\BAUHNN9G\precip 3 (1).png |
| Suppose we change the table. The independent variable and dependent variable have been interchanged. In the previous relation, the input is the month and the output is the average precipitation. In the new relation, the input is the average precipitation and the output is the month. 1. (a) Do we ever get nearly 4 inches of rain in a month?

(b) If so, in what month does that happen? Usually we organize our tables so the values of the domain, the inputs, are listed in increasing order. We list an input only once. Fill in the data into Table 3.1. Does Tables 2 and 3 represent a function? Explain.
2. Plot the data in (Table 2 or Table 3) on the graph below.

C:\Users\TRAVEL\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\BAUHNN9G\precip 3 (1).png8. How does this graph differ from the graph of the data in Table 1? |

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| **Table 2**Average Precipitation for Hartford, CT |
| **Inches** | **Month** |
| 3.66 | 1 |
| 2.65 | 2 |
| 3.61 | 3 |
| 3.82 | 4 |
| 3.99 | 5 |
| 3.83 | 6 |
| 3.93 | 7 |
| 3.83 | 8 |
| 3.83 | 9 |
| 3.91 | 10 |
| 3.79 | 11 |
| 3.44 | 12 |

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| **Table 3**Average Precipitation for Hartford, CT |
| **Inches** | **Month(s)** |
| 2.65 |  |
| 3.44 |  |
| 3.61 |  |
| 3.66 |  |
| 3.79 |  |
| 3.82 |  |
| 3.83 |  |
| 3.91 |  |
| 3.93 |  |
| 3.99 |  |

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