**Think:**

What does the word *statistics* mean to you? Write down any words that come to mind.

**One-Variable Statistics**

Referring to the annual average precipitation rates of Canadian and other international cities found at <http://www40.statcan.gc.ca/l01/cst01/phys08a-eng.htm?sdi=precipitation>:

* Each column in the table from Statistics Canada represents a list of *one-variable statistics*. This means that every number (*entry*) in the column is measuring the \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* From a table, it can be difficult to identify *trends* (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) in the data so we \_\_\_\_\_\_\_\_\_\_\_\_\_ it.
* We can sort data in different ways:
  + **Frequency Distribution Table**
  + **Histogram**

**Frequency Distribution**

A frequency distribution sorts the data into classes (*intervals*) and then counts how many entries fall into each interval. This makes it easier to make a graph and spot trends.

***Rules:***

1. Too few or too many intervals will make it hard to analyze your data. Try to stick to 5-20 intervals. To do this, first find the range of data, and then divide that number by both 5 and 20 to determine how big each interval should be.
2. Make sure that the intervals don’t overlap. If they do, you may end up counting some entries twice. To avoid this, add a decimal place to the start and end values of each interval.

**Example 1**

1. Make a frequency distribution table to represent the number of wet days in Canadian cities by looking at the Stats Canada table.
2. Make a histogram using your frequency distribution.

**Step 1:** Find the range of your data.

**Step 2:** Determine the appropriate number of intervals (number of bars on a histograph)

Try 5 intervals: Try 20 intervals:

Therefore, we could have \_\_\_\_\_\_\_\_\_ intervals since it makes it easier to count.

**Step 3:** Avoid overlapping the intervals. Add decimals to the start and end values of each interval.

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| --- | --- | --- |
| **Interval** | **Tally** | **Frequency** |
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**Step 4:** Complete the table by organizing data into each interval.

Now, graph this data into a histogram. Make sure to label each axis and give your graph a title.