Statistical Reasoning Name:

Activity 4.1 - Tedious Tasks Take Time

Many jobs require employees to perform repetitive tasks. Fast-food restaurants relay on their employees to fill customer’s orders quickly and accurately. Bookkeepers and accountants enter pages of numerical data in Excel spreadsheets. This activity will give you a chance to see how long a tedious task takes you.

**Step 1:** Clear all the lists in your calculator

**Step 2:** You and a partner will take turns completing the tasks listed below. One of your will perform the tasks and other will be the timekeeper. Once all the tasks are done, you will switch roles. Record your time to the **nearest second *(no decimals)*** for each task.

*Task One:*Enter the digits 0, 1, 2, 3, …, 9 in L1 in your calculator. If you entered all of the numbers correctly, record your time here: \_\_\_\_\_. If you didn’t enter all of the numbers correctly, repeat the task.

*Task Two:*Enter the digits 10, 11, 12, 13, …, 19 in L2 in your calculator. If you entered all of the numbers correctly, record your time here: \_\_\_\_\_. If you didn’t enter all of the numbers correctly, repeat the task.

*Task Three:*Enter the digits 100, 101, 102, 103, …, 109 in L3 in your calculator. If you entered all of the numbers correctly, record your time here: \_\_\_\_\_. If you didn’t enter all of the numbers correctly, repeat the task.

*Task Four:*Enter the digits 1000, 1001, 1002, 1003, …, 1009 in L4 in your calculator. If you entered all of the numbers correctly, record your time here: \_\_\_\_\_. If you didn’t enter all of the numbers correctly, repeat the task.

*Task Five:*Enter the digits 10000, 10001, 10002, 10003, …, 10009 in L5 in your calculator. If you entered all of the numbers correctly, record your time here: \_\_\_\_\_. If you didn’t enter all of the numbers correctly, repeat the task.

*Task Six:*Enter the digits 100000, 100001, 100002, 100003, …, 100009 in L6 in your calculator. If you entered all of the numbers correctly, record your time here: \_\_\_\_\_. If you didn’t enter all of the numbers correctly, repeat the task.

**Step 3:** Fill in the table below with your data.

|  |  |  |
| --- | --- | --- |
| **Task No.** | **Total No. of Digits Typed** | **Time (nearest sec.)** |
| 1 (0-9 in L1) | 10 |  |
| 2 (10-19 in L2) | 20 |  |
| 3 (100-109 in L3) | 30 |  |
| 4 (1000-1009 in L4) | 40 |  |
| 5 (10000-10009 in L5) | 50 |  |
| 6 (100000-100009 in L6) | 60 |  |

**Step 4:** Create a scatterplot of your data. On graph paper, draw *x* and *y* axes. Label the *x-axis***“**Total Digits Typed” and the *y-axis*“Time”. Scale the horizontal axis by adding tick marks at 0, 10, 20,…,70. Scale the vertical axis in half-second increments, beginning at 0. Plot each of your six data points on the graph.

**Step 5:** Describe what the graph tells you about the relationship between the two variables.

**Step 6:** Compare graphs with your partner. What similarities do you see? What differences do you see?