LINE OF BEST FIT: TONGUE TWISTERS LAB

 **Objective:**

Do you know how fast you talk? How fast do your friends talk? Try saying these tongue twisters: *The sunshade sheltered Sarah from the sunshine, The Sopchoppy Shoe Shop sells shoes*, *A cricket critic cricked his neck at a critical cricket match,* and *Lavonne lingered, looking longingly for her lost laptop.*

You will time people as they say a tongue twister. Then, you will use scatter plots and graphs to help investigate and display relationships in the data that you collected. Using your function, you will make predictions.

**Materials:**

* Calculator
* Stopwatch
* Piece of Graph paper

**Tongue Twister:**

 “One smart fellow, he felt smart. Two smart fellows, they felt smart.”

**Directions:**

1) List each group member in order and give each group member a job. (2 Timekeepers, Recorder, Point Plotter, and 2 Presenters)

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) Form a semicircle.

3) Using the stopwatch, time Person #1 saying the tongue twister to Person #2.

4) Record the time to the nearest tenth of a second on the table below as Timekeeper #1 time.

5) Record the second timekeeper’s time as Timekeeper #2 time.

5) Take the average of the two timekeepers to get a more accurate recording.

6) Repeat steps 3 – 5 by adding the next person to the chain. Be sure each person speaks one after the other.

|  |  |
| --- | --- |
| **Number of people (x)** | **Time (y)**http://teflworldwiki.com/images/d/dc/Tongue.jpg**(to the nearest tenth of a second)** |
| 1 | Timekeeper #1 time: Timekeeper #2 time:Average: |
| 2 | Timekeeper #1 time: Timekeeper #2 time:Average: |
| 3 | Timekeeper #1 time: Timekeeper #2 time:Average: |
| 4 | Timekeeper #1 time: Timekeeper #2 time:Average: |
| 5 | Timekeeper #1 time: Timekeeper #2 time:Average: |
| 6 | Timekeeper #1 time: Timekeeper #2 time:Average: |



Your group needs to title your graph and label your axes appropriately. Have the Point Plotter create your scatter plot.



(0, 0) 1 2 3 4 5 6

Sketch your line of best fit by hand, and then use your calculator to find the line of best fit. Round your numbers to the nearest TENTH.

a = \_\_\_\_\_\_\_\_\_\_ b = \_\_\_\_\_\_\_\_\_\_\_\_\_

Line of best fit: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Questions:**

1. Estimate the number of seconds it will take for 10 people to say the tongue twister.

2. How long would it take the 330 students to say the tongue twister?

3. Compare your line with a group who used the other tongue twister. Explain any differences.

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**Materials:**

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**Tongue Twister:**

“Three witches wished three wishes, but which witch wished which wish?”

**Directions:**

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1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Materials:**

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**Tongue Twister:**

“If a noisy noise annoys an onion, an annoying noisy noise annoys an onion more!”

**Directions:**

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2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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