

## Line of Best Fit:

1. Starting in January of this year Zac made the goal to save up for a new phone. He had $\$ 564$ in the bank already and needed $\$ 1000$ for the phone. He looked back at how much he was able to save in past months and found the following data.

| Month | Total \$ in Bank |
| :--- | :--- |
| May | 564 |
| June | 601 |
| July | 643 |
| August | 650 |
| September | 709 |

2. Import this data on desmos and sketch the scatter plot.
3. Create a line of best fit.
4. In December how much money can he expect to have saved using the line of best fit?
5. When can Zac expect to have saved enough money to purchase the phone?
6. Make a goal! What do you want to save for? How much does it cost?
7. How much do you currently have saved in the bank?
8. Thinking back or looking back, how much do you tend to save a month? Fill in the tables below with this data.

| Month | \$ Saved Each <br> Month |
| :---: | :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |


| Month | Total \$ in Bank |
| :---: | :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

4. On desmos, plot your data (only plot the Total \$ in Bank data).
5. Create your line of best fit and state it below.
6. Using your line of best fit, how long will it take for you to save enough money to purchase your goal item?
7. How much will you have saved in one year? Two years?
8. Could you save more each month? Add future months to your table with how much you think you could save.
a. How much more quickly do you arrive at your goal amount?
