**Line of Best Fit Practice** **Name**_____

For the following table of values, calculate the line of best fit. Then determine if the table has a positive association, negative association, or no association.

| Temperature, °F ($x$) | No. Customers ($y$) |
|---|---|
| 68 | 317 |
| 63 | 355 |
| 74 | 463 |
| 72 | 419 |
| 79 | 507 |
| 78 | 482 |
| 71 | 433 |
| 71 | 388 |
| 69 | 362 |
| 66 | 340 |

**y =** _____

**Assoc:**_____

| Time (in minutes) | Depth (in cm) |
|---|---|
| 2 | 7 |
| 4 | 8 |
| 6 | 13 |
| 8 | 19 |
| 10 | 20 |
| 12 | 24 |
| 14 | 32 |
| 16 | 37 |
| 18 | 38 |
| 20 | 41 |
| 22 | 47 |

**y =** _____

**Assoc:**_____

| Year of Birth | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 |
|---|---|---|---|---|---|---|---|---|---|
| Life Expectancy | 54 | 60 | 63 | 68 | 70 | 71 | 74 | 75 | 76 |

**y =** _____

**Assoc:**_____

| Cookies in the Jar | | | | |
|---|---|---|---|---|
| Time Since Baked (d) | 1 | 2 | 3 | 4 |
| Cookies | 24 | 16 | 10 | 7 |

**y =** _____

**Assoc:**_____

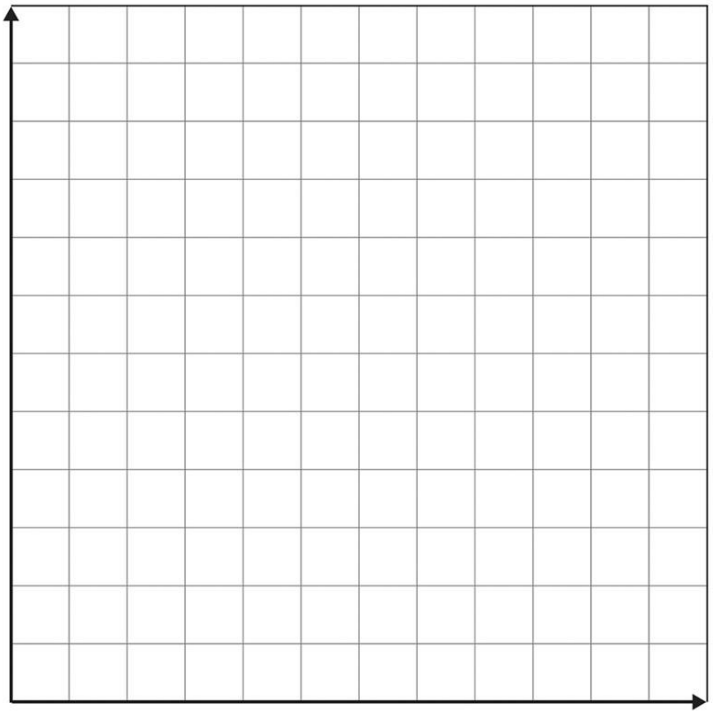
| Shoe Size( X) | Height in inches (Y) |
|---|---|
| 10 | 70.5 |
| 10.5 | 71.0 |
| 11 | 72.0 |
| 9 | 68.5 |
| 12 | 74 |
| 8.5 | 67.5 |

**y =** _____

**Assoc:**_____

**Using the table below, plot the points onto the graph. Then using your calculator, find the line of best fit. Plot the line of best fit onto graph. Make sure to label and scale your graph to fit the data!**

| Shots (x) | Total Makes (y) |
|---|---|
| 0 | 0 |
| 1 | 1 |
| 2 | 1 |
| 3 | 2 |
| 4 | 3 |
| 5 | 3 |
| 6 | 3 |
| 7 | 3 |
| 8 | 4 |
| 9 | 4 |
| 10 | 5 |
| 11 | 6 |
| 12 | 7 |
| 13 | 8 |
| 14 | 8 |



1) **If you were to take 25 shots, how many could you expect to make?**

2) **If you were to take 100 shots, how many could you expect to make?**

3) **If you make 80 shots, how many shots did you most likely take?**

4) **What type of association does the scatter plot above have and what is the strength of the association? Explain your answer.**