

## Alg Stats 2.3b

## A "Line of Best Fit" Contest

This is a contest to see who can come up with the best "Line of Best Fit".

- Create a scatter plot on graph paper and on the calculator.
- Create your equations.
- Pick the equation you like the best. Circle it.

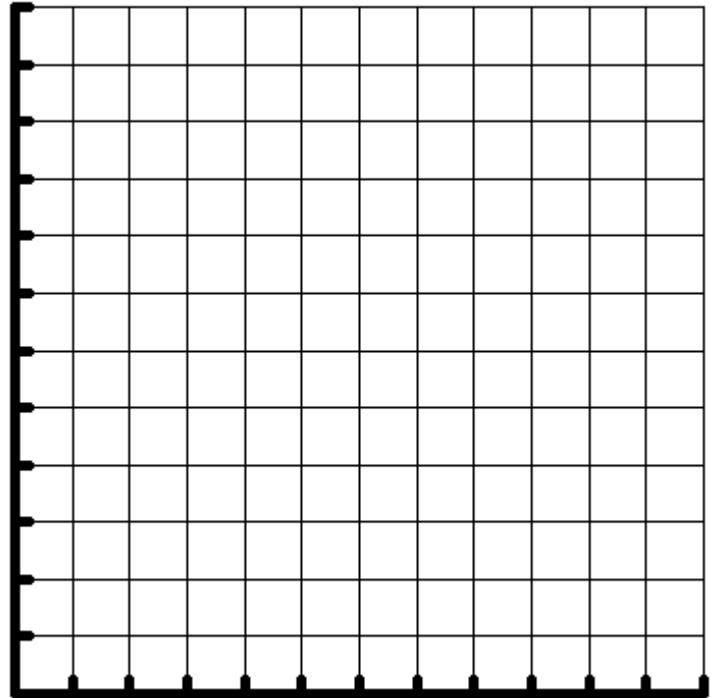
### I. Build the line of best fit by hand

- Plot the following points on the coordinate plane below.  
(1,2), (3,1), (4,4), (7,1),  
(8,4), (10,6)
- Lay a piece of spaghetti on the graph in such a way that you believe it best represents the data.
- Find two integer coordinate points on the spaghetti line and write the equation of your line in slope intercept form.

Coordinate points:

\_\_\_\_\_

y = \_\_\_\_\_



### II. Build the line of best fit on a calculator.

- Enter the same points into your graphing calculator. Put the x values into L1 and the y values into L2.
- Plot a scatter plot using lists L1 and L2.
- Lay a toothpick on the calculator to simulate a line of best fit.
- Use a free floating cursor to pick two points on the line. Use these coordinates to find the slope and then write an equation in slope intercept form.

Coordinate points \_\_\_\_\_ Equation y = \_\_\_\_\_

**STOP HERE until everyone has recorded their equation.**

III. Find the equation of the line by calculating a linear regression. WHO WON? How close did you come?