4.4 - Line of Best Fit Assignment
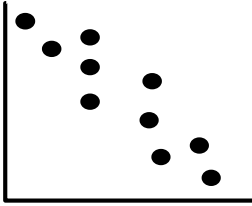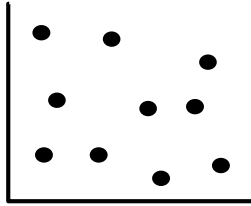
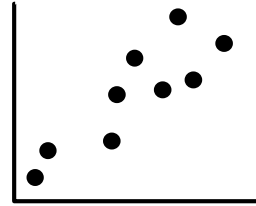Graph A   Graph B   Graph C

1. Which graphs seem to have a pattern? Explain.

   _____

   _____

2. For graphs A, B, C draw your Line of Best Fit considering that your line must:

   [1] Go through as many points as possible. [2] Have the same number of points above and below

3. Plot the given data, and then draw a Line of Best Fit using your ruler and estimating where it should lie.

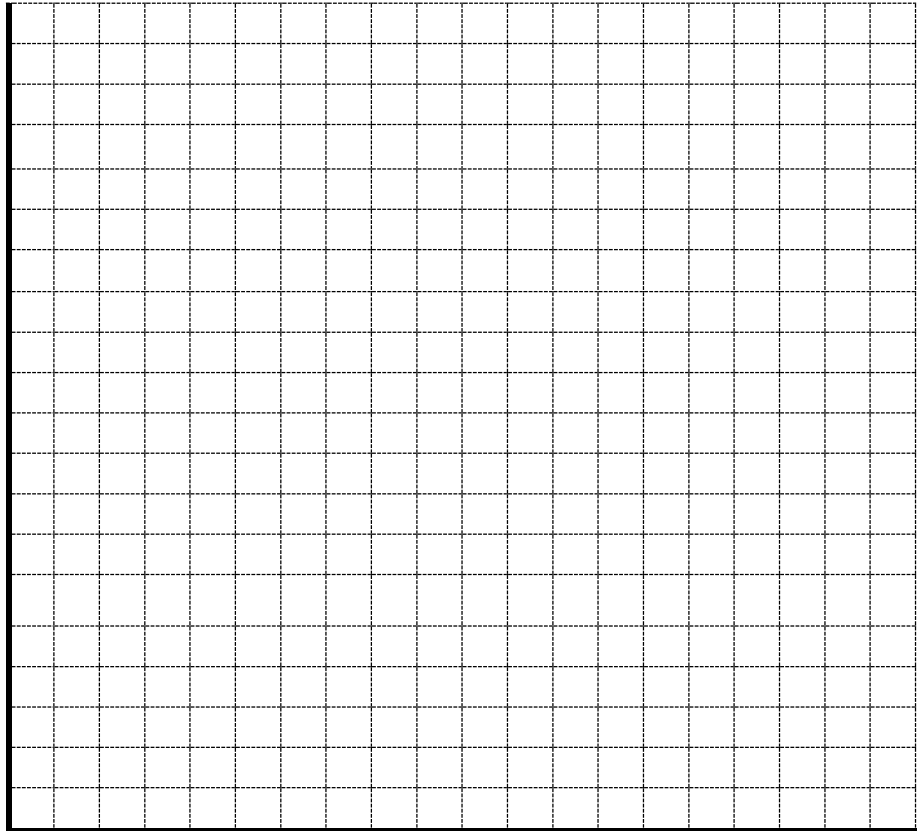| Minutes Spent Studying	Mark on Exam
120	50
340	82
170	49
250	70
275	72
200	65
325	82
90	40
470	98
320	90
100	44
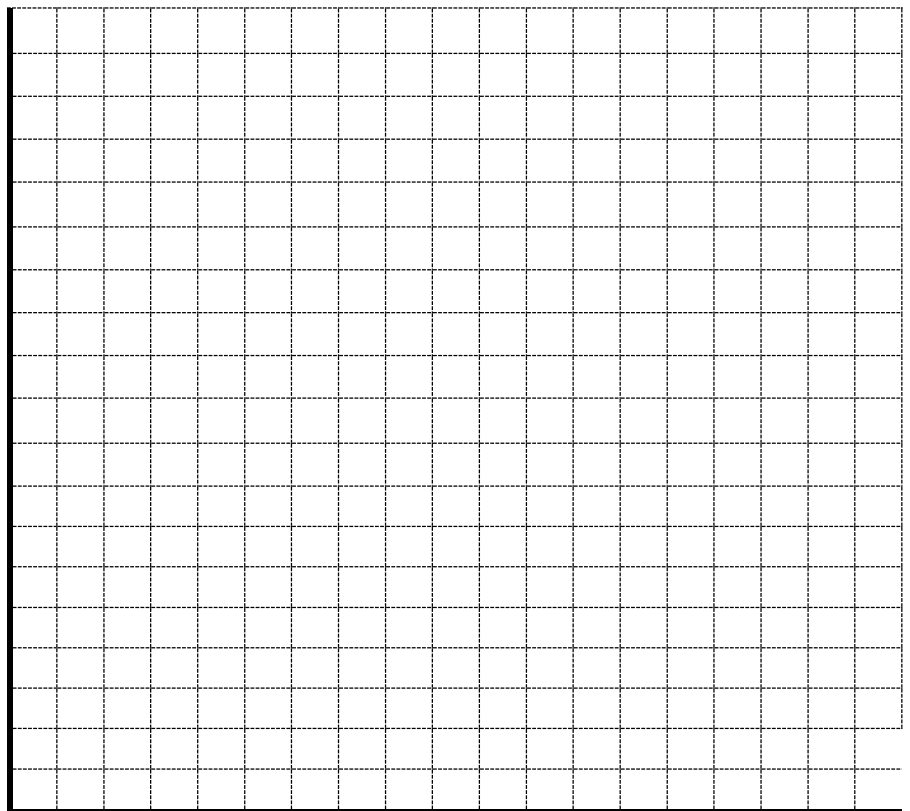
a.   What is the equation of the line of best fit to 2 decimal places_____

b. What is the value of r? _____   c.   What is the correlation? _____

d. What does this value tell you about the correlation between one's mark on an exam and their studying

   time? _____

4. For the following data, determine and graph the Line of Best Fit and then answer the question below.

Hours of TV per week	Hours of Reading per week
6	12
20	6
30	2
12	9.5
15	8.5
18	4.5
21	5.5
26	3
25	3
10	8
9	8.5
15	5
13	7
24	4
23	4
21	5.5

a. About how many hours per week to people read if they watch 22 hours of TV? _____

b. About how many hour/week of TV do people watch if they read for 10 hours? _____

c. Complete the following sentence. The trend seems to be that, the more time you spend watching TV,

_____

d. What is the equation of the line of best fit to 2 decimal places _____

e. What is the value of r? _____

f. What is the correlation? _____

g. Extrapolate the number of hours of reading per week if a person watched no TV _____

h. Extrapolate the number of TV viewing hours per week if a person didn't read. _____

i. What is healthier? TV watching or Reading books? _____