## MathFLIX CHALLENGE

## Line of Best Fit

A "line of best fit" is drawn through a set of data points so the same number of points appear above the line as below the line. We can use a "line of best fit" to help make predictions. Study the following samples to decide if they illustrate a "line of best fit." If the line is incorrect, draw a new correct line of best fit so there are an equal number of points on both sides of the line.







Plot the ordered pairs in the table below then use a toothpick or a strand of spaghetti to determine the line of best fit. Once you are satisfied with your line of best fit, use a ruler to draw it then answer the questions that are below the table and graph.

| Study Hours | Test | Ordered Pairs |          |                                 |  |  |  |  |  |  |
|-------------|------|---------------|----------|---------------------------------|--|--|--|--|--|--|
| 3           | 80   | (3,80)        | 100      |                                 |  |  |  |  |  |  |
| 5           | 90   | (5,90)        | 90       |                                 |  |  |  |  |  |  |
| 2           | 75   | (2,75)        | 80       |                                 |  |  |  |  |  |  |
| 6           | 80   | (6,80)        | 70 -     |                                 |  |  |  |  |  |  |
| 7           | 90   | (7,90)        | 00 st Sc |                                 |  |  |  |  |  |  |
| 1           | 50   | (1,50)        | e 50     |                                 |  |  |  |  |  |  |
| 2           | 65   | (2,65)        | 40       |                                 |  |  |  |  |  |  |
| 7           | 85   | (7,85)        | 30       |                                 |  |  |  |  |  |  |
| 1           | 40   | (1,40)        | 20       |                                 |  |  |  |  |  |  |
| 7           | 100  | (7,100)       | 10       |                                 |  |  |  |  |  |  |
|             |      |               |          | 1 2 3 4 5 6 7<br>Hours of Study |  |  |  |  |  |  |

1. All students are different, but approximately how many hours of study are necessary to get a score of 82?

2. If a student scores 55%, approximately how many hours might you predict the student spent studying?

3. If your friend wants to pass the test with a 70%, how much time should you tell your friend to study?

4. Circle the word that makes this sentence true: The data indicates that the (more fewer) hours of study, the (higher lower) the test score.

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