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| \*Learning Target: |
| \*Critical Content: |

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| **Bivariate Data** |  |
| **Scatter Plot** |  |

3 Types of Correlation \*FILL IN THE GRAPHS BELOW

1) Positive Correlation 2) Negative Correlation 3) No Correlation



Ex1: Determine whether the graph shows a positive, negative, or no correlation. If there is a positive or negative correlation, describe the meaning in the situation.



Scatter plots can show whether there is a \_\_\_\_\_\_\_\_\_\_\_ in a set of data. When the data points all lie \_\_\_\_\_\_\_\_\_\_\_ to a

\_\_\_\_\_\_\_\_\_\_\_, a \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_ \_\_\_\_\_\_ or a \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ can model the trend.

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| **To Make a Line of Fit** |
| Step 1: |  |
| Step 2: |  |
| Step 3: |  |
| Step 4: |  |

Ex2: The table shows vertical drops of 9 roller coasters in the US and the number of years after 1988 that they were opened. Identify the independent and dependent variables. Is there a relationship? If so, predict the drop in a roller coaster built 25 years after 1988.



Step 1) Make a scatter plot Step 3)Write an equation in y = mx + b form. Pick two points on the line.

Step 2) Draw a line of fit
-Hit as many points as possible
-Try to have an even number of points
above and below line

 Step 4) Plug 25 years after 1988 into the equation found in step 3.

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| **Linear Interpolation** |  |

\*Ex: Using the information in the previous example, find the vertical drop of a roller coaster built in 1997.