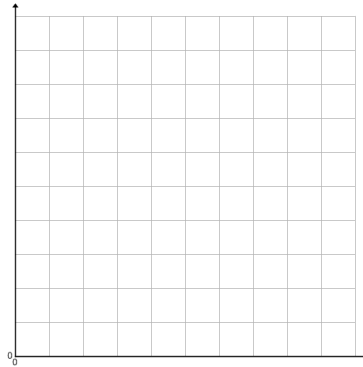


Example 1: The following table shows the relationship between a student's mark and the number of hours he/she spent watching tv.

Hours of TV	Mark (%)
2	82
4	64
0	84
3	70
2	74
2	76
1	85
3	73
1	94
2	90

- Identify the dependent and independent variables.
- Make a scatter plot of the data.
- Describe the general trend of the data.
- Draw a line of best fit to model the data.



Line of Best Fit needs to fit the following criteria:

- It passes through the center of the data.
- It has the minimum number of outliers above and below the line.

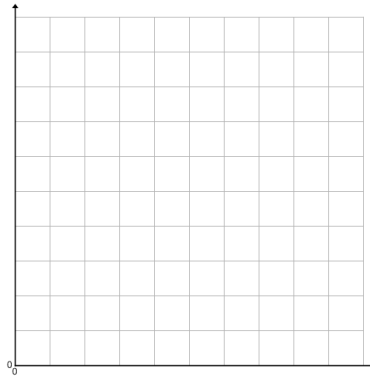
The LINE OF BEST FIT: allows us to make predictions for values not actually recorded and plotted.

INTERPOLATION: involves making a prediction of a value **WITHIN** the recorded data.
 Example: Predict a student's score if he/she spends 2.5 hours watching tv.

EXTRAPOLATION: involves making a prediction of a value **OUTSIDE** the recorded data.
 Example: Predict the score of a student who watches 4.5 hours of tv.

Example 2: The following table represents data from a survey to determine the relationship between a student's age and the number of books they have read in the past year.

Age(years)	Books Read
16	5
15	3
18	8
17	6
16	4
15	4
14	5
17	15



- Make a scatter plot of the data.
- Describe the relationship between the variables.
- Draw a line of best fit.
- Predict how many books a 19 year old would have read. (Is this Interpolation or Extrapolation?)
- Predict how many books a 14.5 year old would have read. (Is this Interpolation or Extrapolation?)
- If a student read 7 books approximately how old would he/she be?
- Are there any limitations to this data?

Assigned Work

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QUIZ NEXT CLASS!!