Line of Best Fit

Example 1: The following table shows the relationship between a   student's mark and the number of hours he/she spent watching tv.
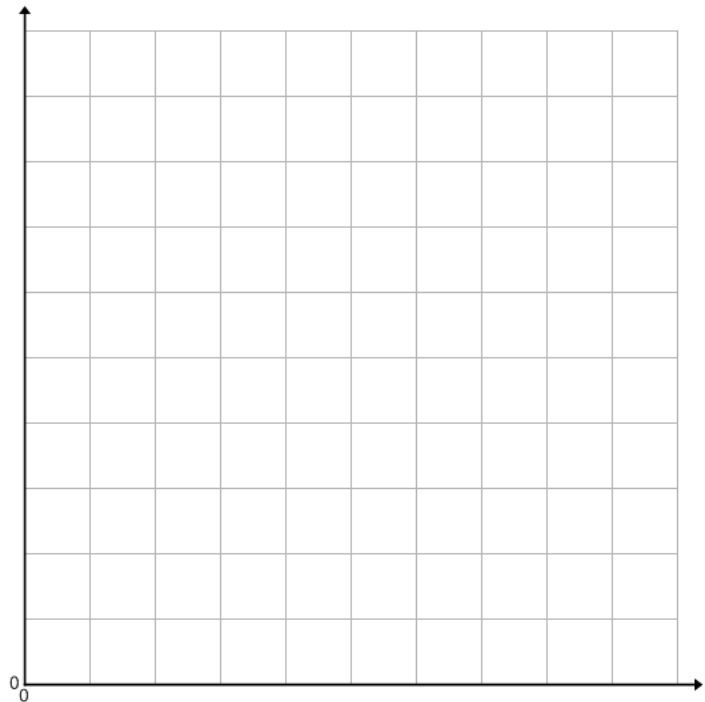
Hours of TV	Mark (%)
2	82
4	64
0	84
3	70
2	74
2	76
1	85
3	73
1	94
2	90

a) Identify the dependent and independent variables.

b) Make a scatter plot of the data.

c) Describe the general trend of the data.

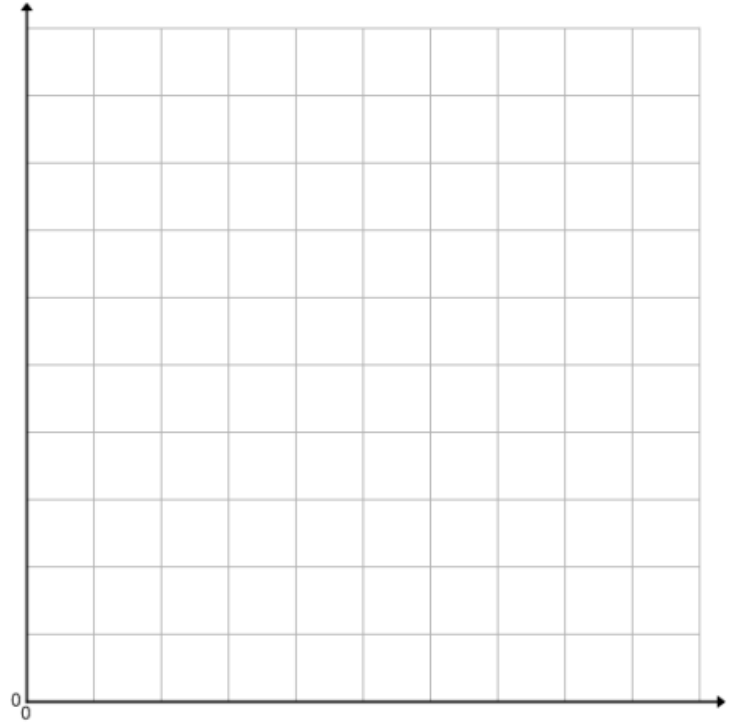d) Draw a line of best fit to model the data.

The LINE OF BEST FIT:

INTERPOLATION:

EXTRAPOLATION:

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

a) Make a scatter plot of the data.
b) Describe the relationship between the variables.

c) Draw a line of best fit.

d) Predict how many books a 19 year old would have read. (Is this Interpolation or Extrapolation?)

e) Predict how many books a 14.5 year old would have read. (Is this Interpolation or Extrapolation?)

f) If a student read 7 books approximately how old would he/she be?

g) Are there any limitations to this data?