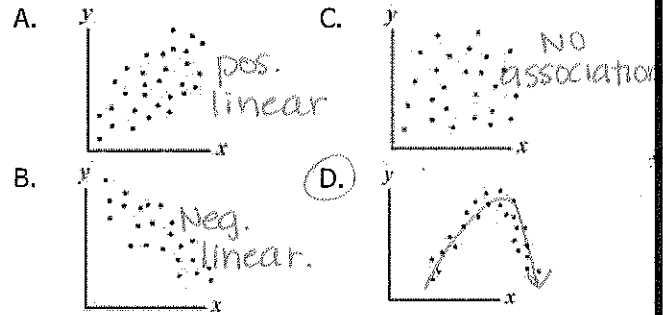


8.SP.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, or non-linear associations

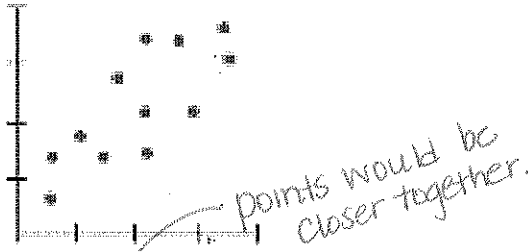
For which of the follow data sets would you expect a positive association?

- A. The amount of free time you have and the hours of homework you have. *Neg.*
- B. The sales of snow shovels and the amount of snowfall. *pos.*
- C. The length of a baby at birth and the month in which the baby was born. *NO.*
- D. The number of shoes you own and the size of your shoes. *NO.*

Which of the scatter plots below shows a non linear association?



How would you describe the association below?

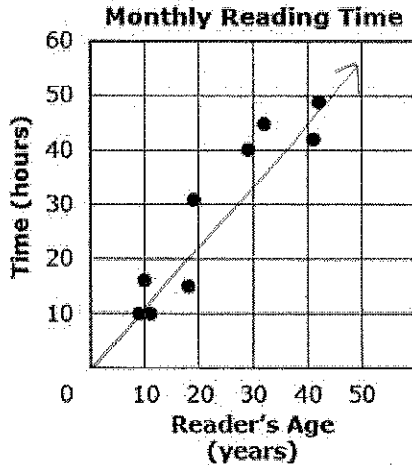


- A. Strong positive association
- B. Strong negative association
- C. Weak positive association
- D. Weak negative association

Paul creates a scatter plot with a negative association. The x-axis of the scatter plot is titled "minutes spent at the mall". Which label is most likely the title of the y-axis of Paul's scatter plot? As time spent at the mall increases _____ decreases.

- A. Distance walked
- B. Money available to spend
- C. Number of movies seen
- D. Number of stores visited

The scatter plot shows the relationship between the age of a reader and the time, in hours, the reader spends reading each month.



Part A: What type of association (positive or negative) is shown between the age of the reader and the hours spent reading per month? Explain your answer.
positive. As age increases, time spent reading increases too.

Part B: Does the data show a linear or non linear relationship? Explain your answer.

Linear. You can see a pattern of increase that can be modeled by a line.

Part C: Write an equation to represent the data. Explain what the numbers you used in the equation represent.

$y = x + 0$. I used 2 points on the line (0,0) & (10,10)

$m = 1$ $y_{int} = 0$ slope = As age increases by 1, time spent reading increases by 1hr. per month.

$y_{int} = 0$ meaning a newborn does not spend any time reading.