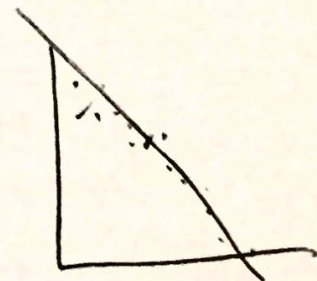
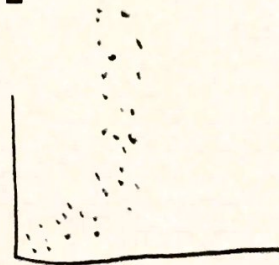
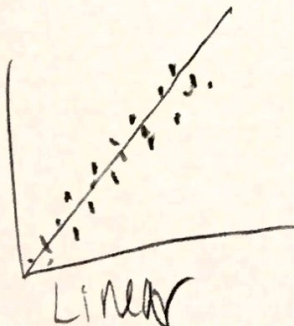


Vocabulary:

- **Scatter Plot** – a collection of points  $(x, y)$  on a graph that may or may not have trend
- **Positive Correlation** – both the  $x, y$  values are increasing  
positive
- **Negative Correlation** – when  $x$  increases and  $y$  decreases  
Negative
- **No Correlation** -  
Not positive  
Not negative
- **Linear or Non-Linear** -



Time = X

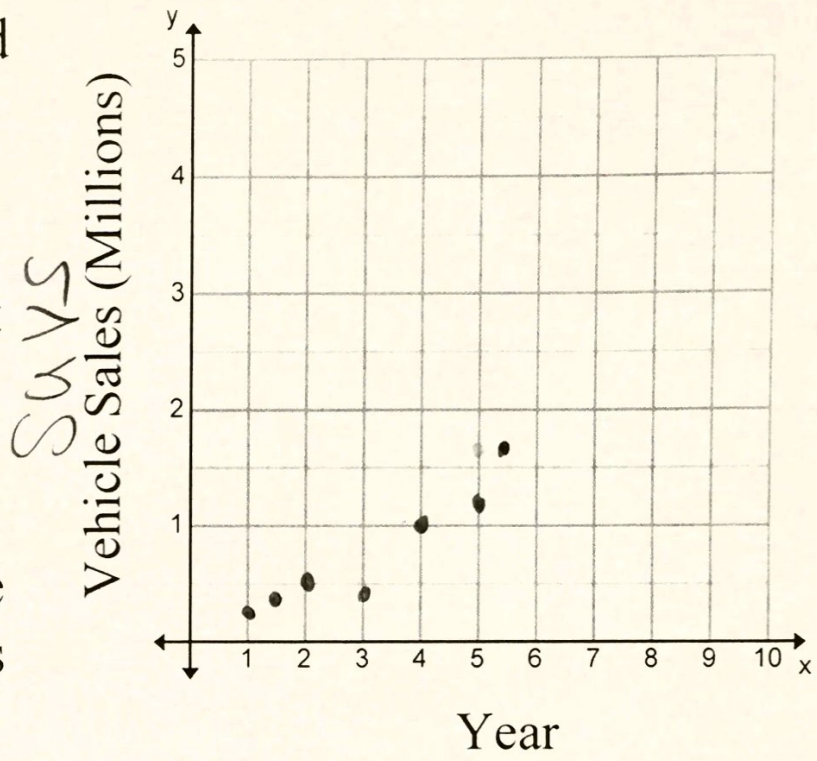
Notes 5-3  
Scatter Plots

Int 2

Unit 5

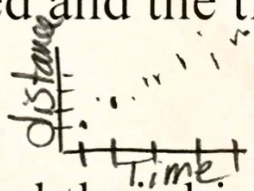
**Ex. 1:** Data was collected regarding the purchase of SUV vehicles in comparison with compact cars. Experts suggest that the purchase of SUV's is on the rise.

Use the graph to complete a scatter plot that supports the experts claim.



Explain whether a scatter plot for each pair of variables would probably show a *positive*, *negative*, or *relatively no correlation* between the variables.

**Ex. 2:** The distance traveled and the time driving



**Ex. 3:** A person's height and their birth month

No Correlation

**Ex. 4:** The amount of snow on the ground and the daily temperature

Negative

Explain whether a scatter plot for each pair of variables would probably show a *positive*, *negative*, or *relatively no correlation* between the variables.

Ex. 5: The amount of time you exercise  $\uparrow$  and the amount of calories you burn  $\uparrow$

Positive

Ex. 6: The time water boils  $\uparrow$  and the amount of water in the pot  $\downarrow$

Negative

Ex. 7: The number of files stored on a thumb drive  $\uparrow$  and the amount of memory left on the drive  $\downarrow$ .

negative

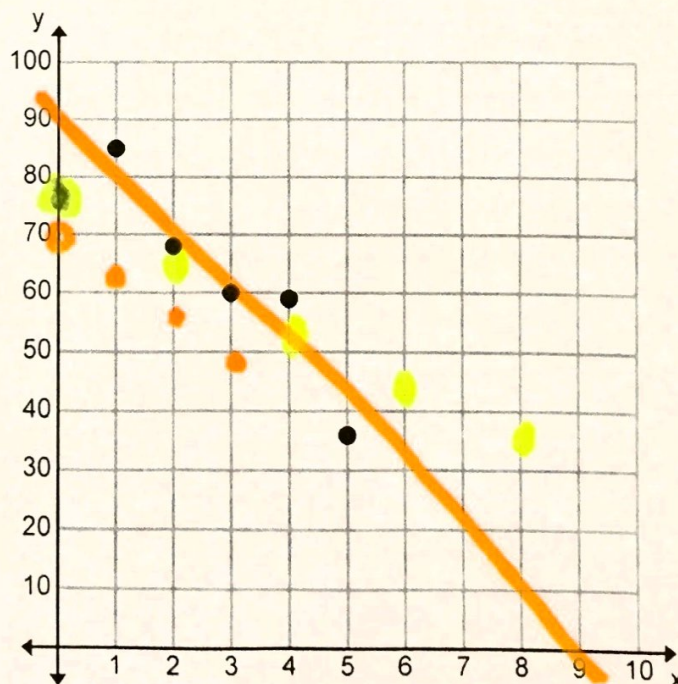
Ex. 8: Which equation is the best fit for the scatter plot?

~~A.  $y = -\frac{9}{2}x + 77$~~

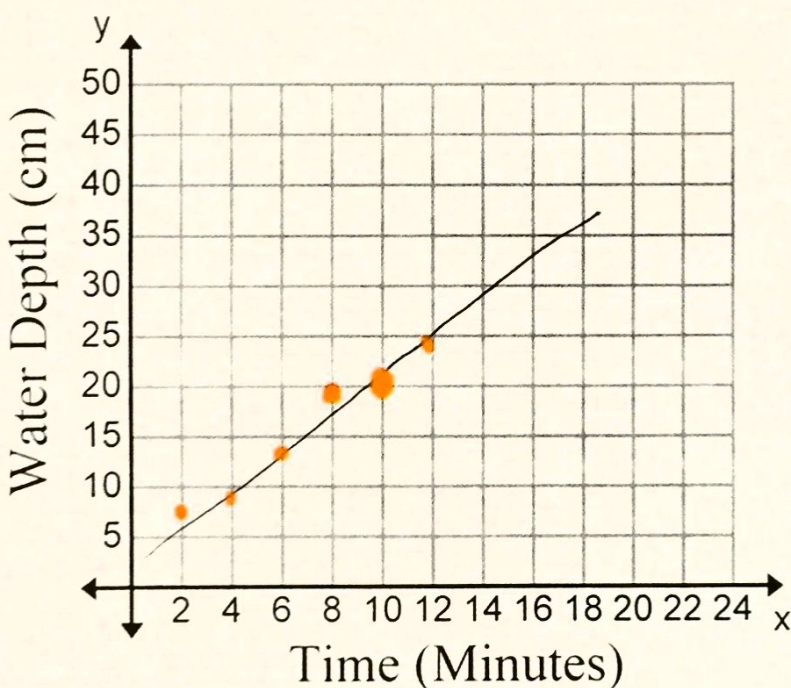
~~B.  $y = 10x + 10$~~

C.  $y = -8x + 70$

D.  $y = -10x + 90$



**Ex. 9:** Rose measured the depth of the water in a bathtub at two-minute intervals after the tap was turned on. The table shows the data prepared by her. Plot the points for the scatter plot.



Time (min)	Depth (cm)
2	7
4	8
6	13
8	19
10	20
12	24
14	32
16	37
18	38
20	41
22	47

Does this situation show a positive, a negative, or a relatively no correlation?

*positive*

Draw a line of best fit for the scatter plot above.