

Algebra I

6.4 Worksheet

Scatter Plots
Correlation

NAME: _____

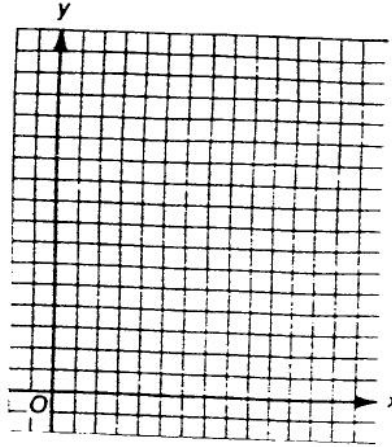
DATE: _____ HOUR: _____

Make a scatter plot for the following set of data.

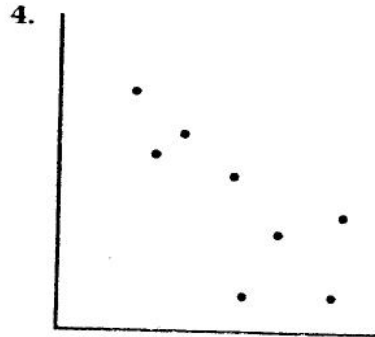
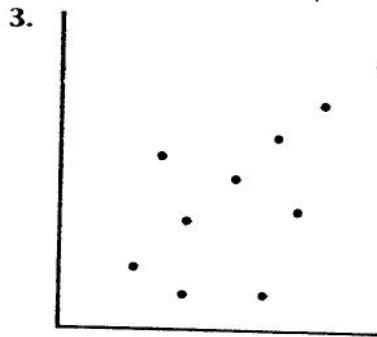
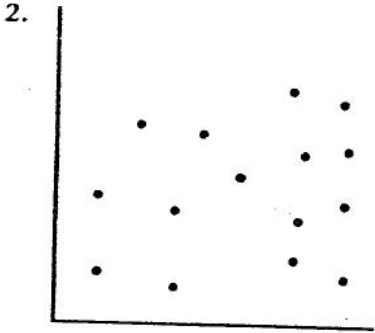
1.

x	0	2	4	6	8
y	3	6	10	13	17

Explain whether there is a positive or negative correlation.



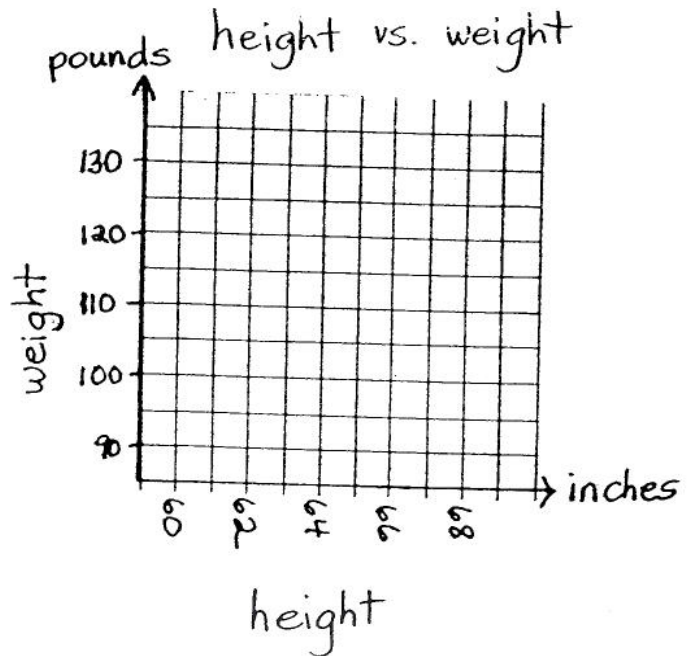
Describe the correlation as positive, negative, or none.



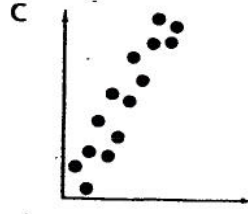
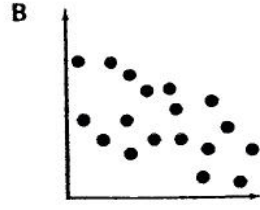
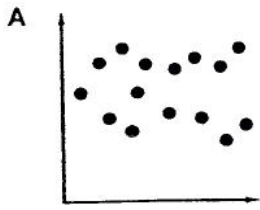
Make a scatter plot of the data at the right.
Describe the correlation, if any.

Name	Height	Weight
Caleb	60 in.	90 lb
Ciarra	63 in.	99 lb
Damon	67 in.	125 lb
Jennifer	62 in.	96 lb
Juan	68 in.	132 lb
Suzette	65 in.	116 lb
Rodrick	63 in.	96 lb

- A strong positive
- B weak positive
- C strong negative
- D weak negative

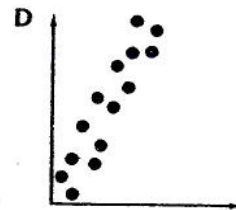
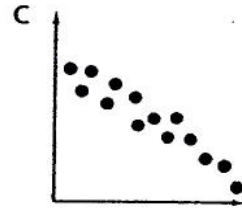
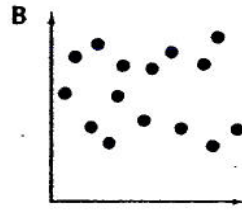
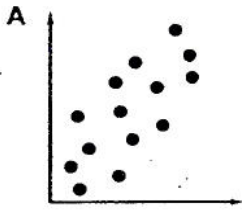


6. Which of the following graphs represents a negative correlation?



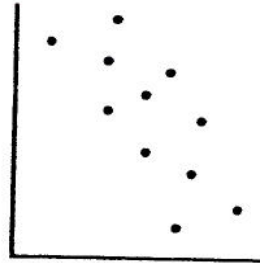
D none of the above

7. Which scatter plot shows a strong positive correlation?



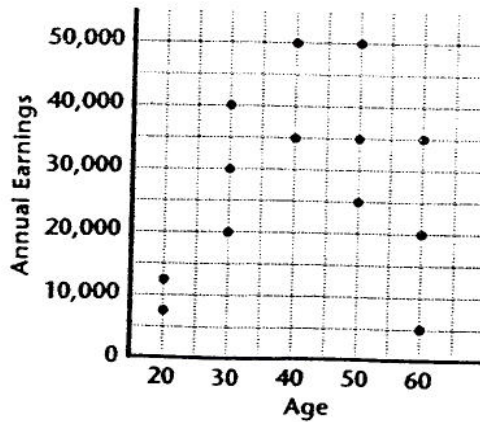
8. How would you describe the data in the scatter plot?

- a. strong correlation b. positive correlation
c. negative correlation d. little or no correlation



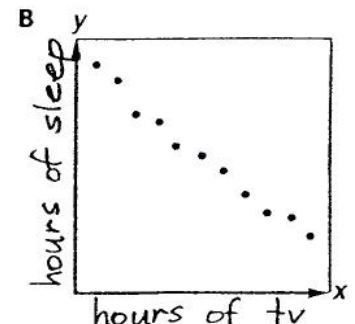
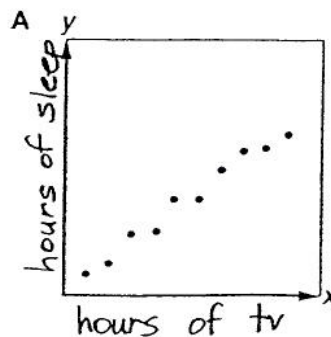
9. Which statement fits the scatter plot?

- a. There is a positive correlation between age and annual earnings.
b. As a person gets older, his or her earnings always increase.
c. As a person gets older, their earnings decrease.
d. You cannot tell whether there is a correlation between age and annual earnings.

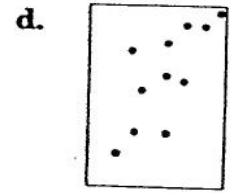
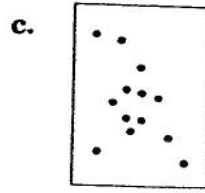
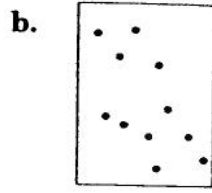
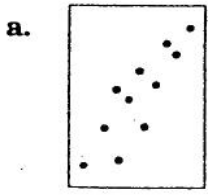


10. Suppose you survey each of your classmates to find the number of hours they sleep each day and watch TV each day. Then you draw a scatter plot of the data where the x -coordinate is hours of TV and the y -coordinate is hours of sleep. You conclude that as the hours of TV increase, the hours of sleep decrease. Which scatter plot shows this relationship?

A or B

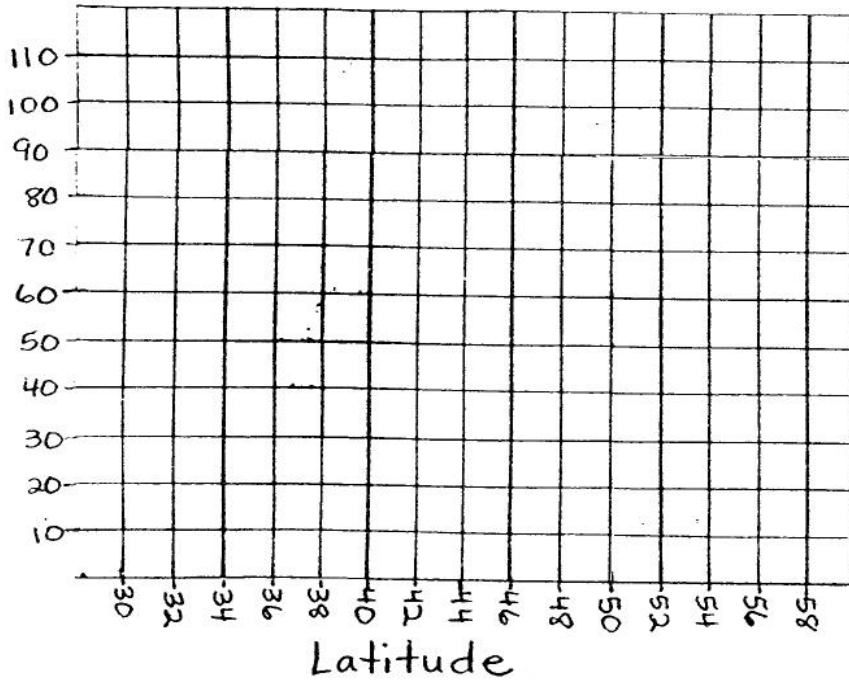


1. What does each of these scatter plots show: Strong positive correlation? Weak positive correlation? Strong negative correlation? Weak negative correlation? Little or no correlation?



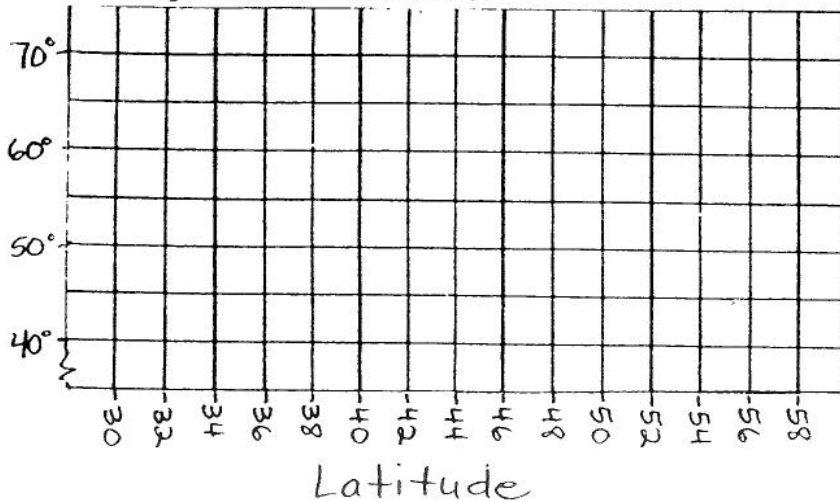
2. Draw two scatter plots for the data in the table.

- a. Latitude (horizontal axis) versus snowfall (vertical axis).



Latitude of city	Annual snowfall (inches)	Average October temperature (°F)
42	66	51
35	11	57
33	2	62
43	21	52
42	40	52
46	36	46
30	0	70
58	103	42
36	11	60
32	3	68
43	40	49
40	59	53

- b. Latitude (horizontal axis) versus temperature (vertical axis).

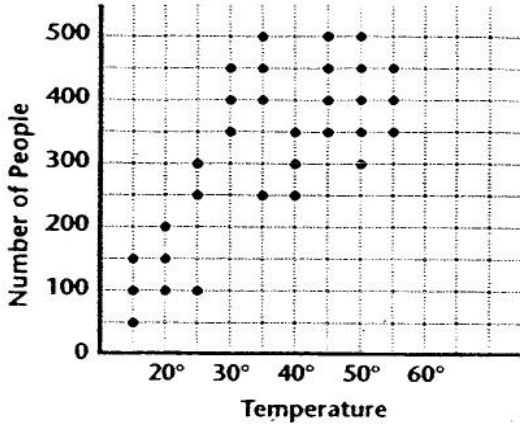


Describe the correlation for each scatter plot.

a.

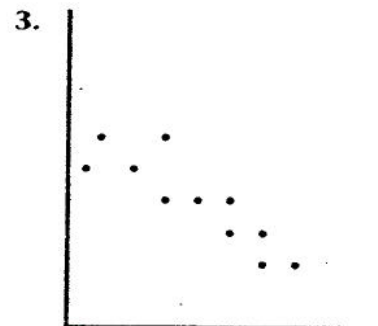
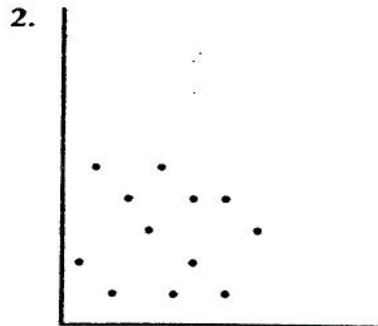
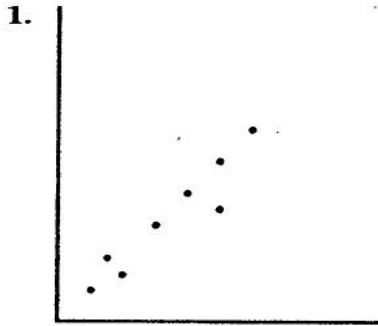
b.

Daily Attendance at a Ski Resort



Describe the correlation between the number of ski resort visitors and the temperature.

Tell whether the correlation for the scatter plot is positive, negative, or neither.



Model Problem Constructing a Scatter Plot

Make a scatter plot for these data and determine whether there is no correlation, a negative correlation, or a positive correlation between the two sets.

Student	Ali	Ben	Bry	Cal	Dina	Erin	Gil	Hari
Absences	0	2	3	1	4	2	0	3
Average grade	99	79	76	84	65	80	94	77

Student	Lon	Mei	Paolo	Pete	Rae	Suki	Tess
Absences	0	2	1	2	1	0	5
Average grade	95	78	86	88	78	85	56

absences vs. grades

