

Key

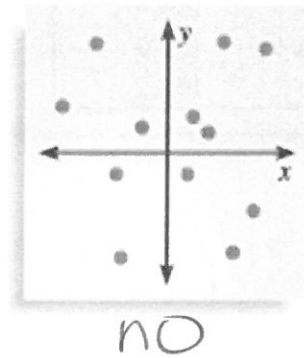
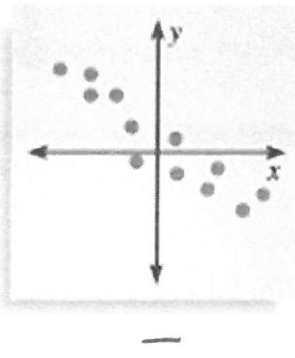
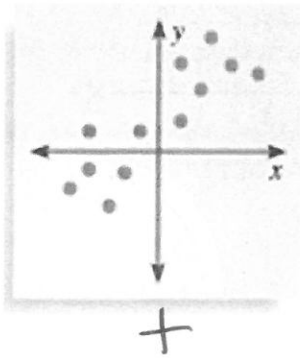
Unit 0 0.7 Scatterplots

A scatter plot is a graph used to determine whether there is a relationship between paired data.

If y tends to increase as x increases, then there is a positive correlation.

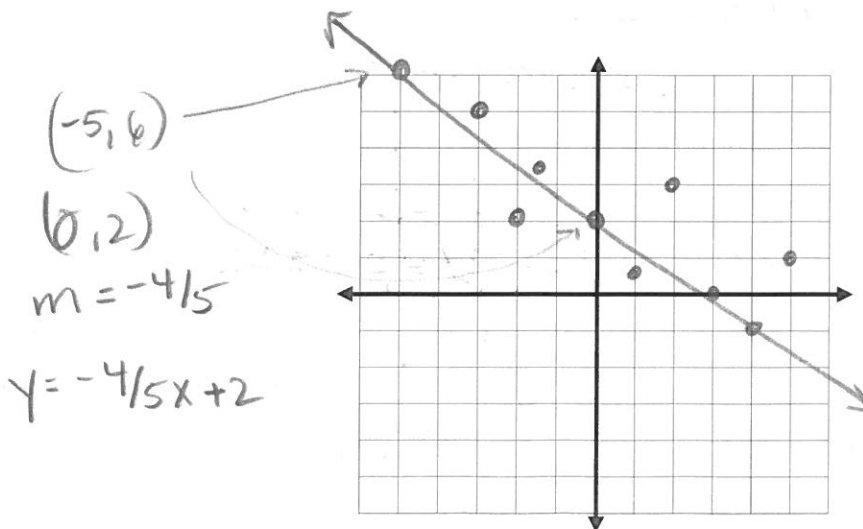
If y tends to decrease as x increases, then there is a negative correlation.

If the points show no linear pattern, then there is relatively no correlation.



Draw a scatter plot of the data and describe the correlation shown by the scatter plot.

x	-5	-3	-2	-1.5	0	1	2	3	4	5
y	6	5	2	3.5	2	0.5	3	0	-1	1



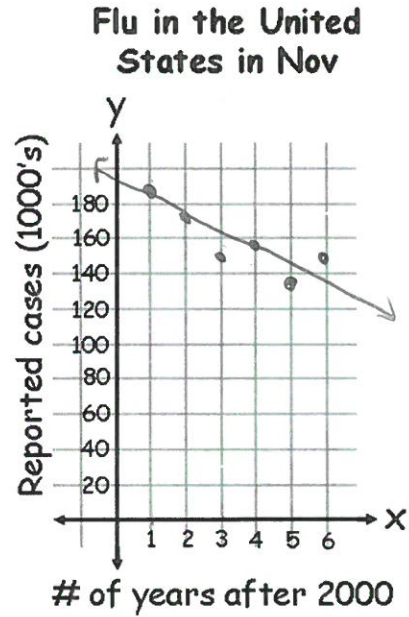
negative

Find a line of best fit thru middle choose two points on line Find equation

Create a scatter plot and describe it's correlation.

Flu in the U.S. in Nov	
Year	Reported Cases (in thousands)
2001	184.3
2002	172.1
2003	148.3
2004	156.4
2005	137.9
2006	150.2

negative
the reported cases decrease as # of years increases



Now find an equation for the line of best fit. Draw a trend line through the middle of your data.

Use the best two ordered pairs from table that are closest to your line to find the slope for the line! $(2001, 184.3)$ use $(1, 184.3)$
 $(2004, 156.4)$ $(4, 156.4)$

Use your slope and one point to find the equation using point slope formula.

$$m = \frac{156.4 - 184.3}{4 - 1} = \frac{-27.9}{3} = -9.3$$

$$y - 184.3 = -9.3(x - 1)$$

$$y - 184.3 = -9.3x + 9.3$$

$$y = -9.3x + 193.6$$

Now use your equation to predict the number of flu cases in 2015.

$$y = -9.3(15) + 193.6 = \boxed{54.1 \text{ cases}}$$

A2: Now on your calculator.
use 1,2,3...

$$y = -7.57x + 184.7$$

$$r = -.83$$