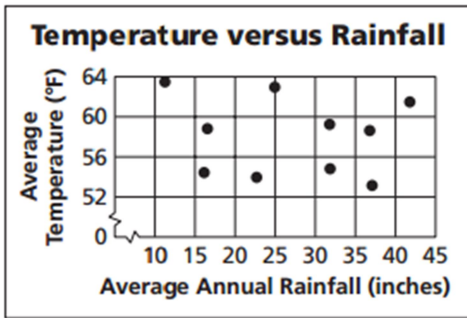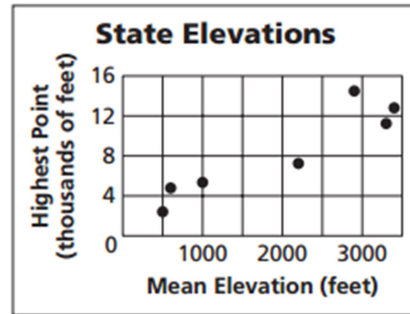**Determine whether each graph shows a *positive correlation*, a *negative correlation*, or *no correlation*. If there is a positive or negative correlation, describe its meaning in the situation.**

1)

Temperature versus Rainfall

Average Temperature (°F)

64
60
56
52
0

10 15 20 25 30 35 40 45
Average Annual Rainfall (inches)

Source: National Oceanic and Atmospheric Administration

2)

State Elevations

Highest Point (thousands of feet)

16
12
8
4
0

1000   2000   3000
Mean Elevation (feet)

Source: U.S. Geological Survey

For Exercises 3-6, use the table that shows the number of cases of mumps in the United States for the years 1995 to 2003.

U.S. Mumps Cases					
Year	1995	1997	1999	2001	2003
Cases	906	683	387	116	56

Source: Centers for Disease Control and Prevention

3) Draw a scatter plot and determine what relationship, if any, exists in the data.

U.S. Mumps Cases

Cases

1000
800
600
400
200
0

1995   1997   1999   2001   2003
Year
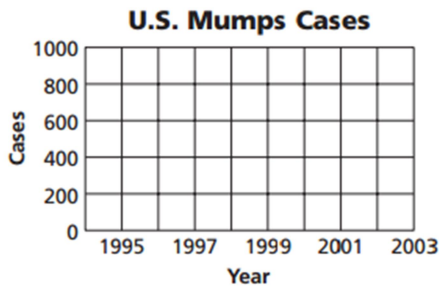
4) Write the slope-intercept form of an equation for the line of fit.

5) Predict the number of cases in 1900.

6) According to the model, when will the disease be eradicated?

For Exercises 7-11, use the table that shows the average and maximum longevity of various animals in captivity.

Longevity (years)								
Avg.	12	25	15	8	35	40	41	20
Max.	47	50	40	20	70	77	61	54

Source: *Walker's Mammals of the World*

7) Draw a scatter plot and determine what relationship, if any, exists in the data.
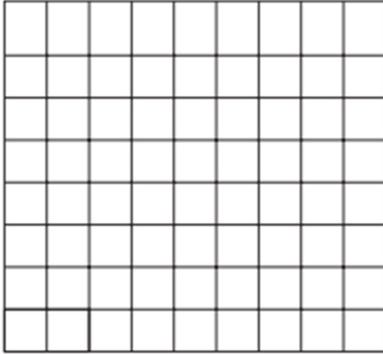
8) Write the slope-intercept form of an equation for the line of fit.

9) Predict the maximum longevity for an animal with an average longevity of 33 years.

10) Predict the average longevity of an animal that has a maximum longevity of 65 years.

11) Predict the maximum longevity for an animal with an average longevity of 10 years.