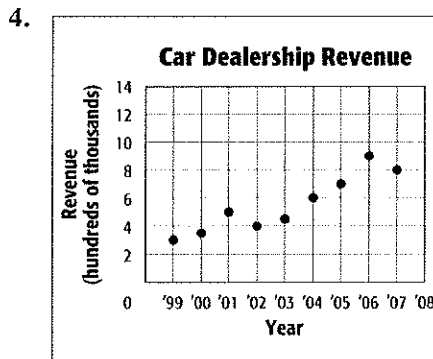
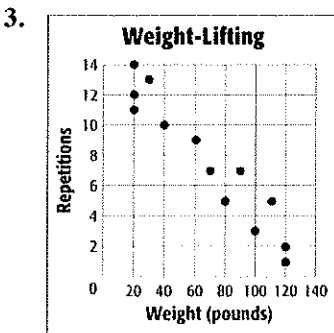
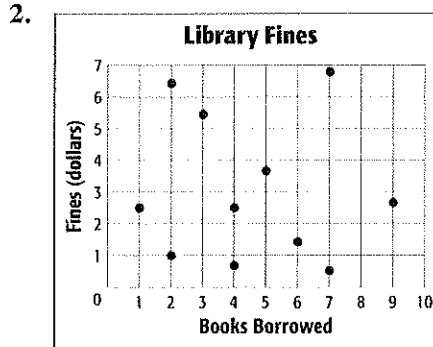
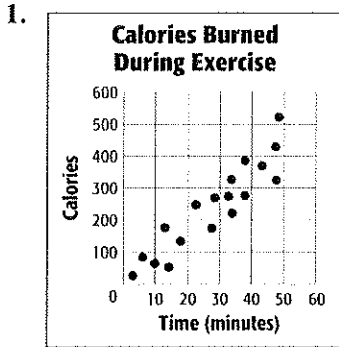


## 4-4 Skills Practice

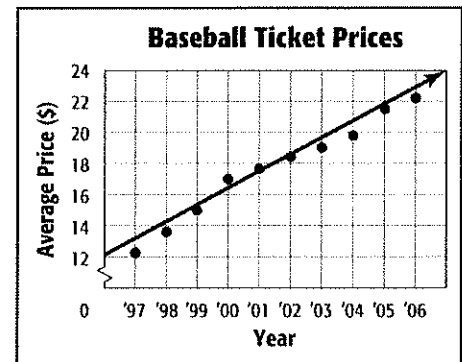
### Scatter Plots and Lines of Fit

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.



5. **BASEBALL** The scatter plot shows the average price of a major-league baseball ticket from 1997 to 2006.

- Determine what relationship, if any, exists in the data. Explain.
- Use the points (1997, 13) and (2005, 22) to write the slope-intercept form of an equation for the line of fit shown in the scatter plot. Round values to the nearest hundredth.
- Predict the price of a ticket in 2009.

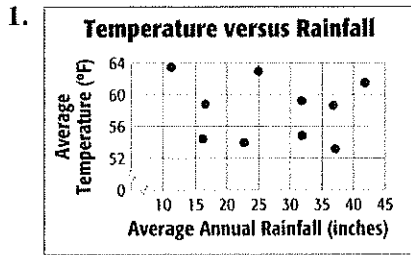


Source: Team Marketing Report, Chicago

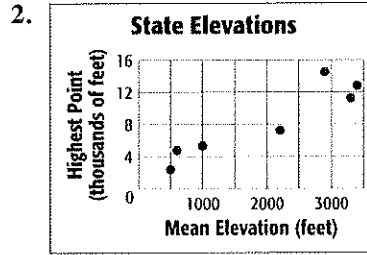
# 4-4 Practice

## Scatter Plots and Lines of Fit

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.



Source: National Oceanic and Atmospheric Administration



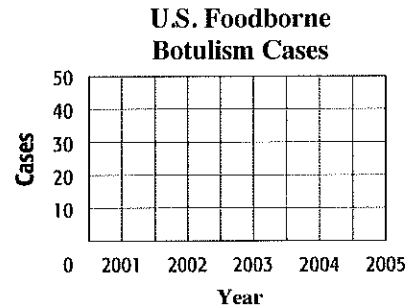
Source: U.S. Geological Survey

3. **DISEASE** The table shows the number of cases of Foodborne Botulism in the United States for the years 2001 to 2005.

U.S. Foodborne Botulism Cases					
Year	2001	2002	2003	2004	2005
Cases	39	28	20	16	18

Source: Centers for Disease Control

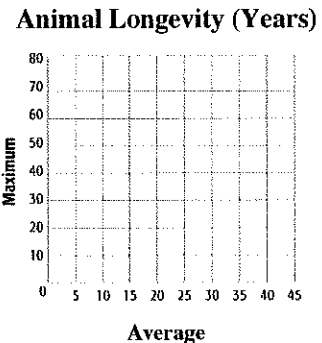
- Draw a scatter plot and determine what relationship, if any, exists in the data.
- Draw a line of fit for the scatter plot.
- Write the slope-intercept form of an equation for the line of fit.



4. **ZOOS** The table 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

- Draw a scatter plot and determine what relationship, if any, exists in the data.
- Draw a line of fit for the scatter plot.
- Write the slope-intercept form of an equation for the line of fit.
- Predict the maximum longevity for an animal with an average longevity of 33 years.

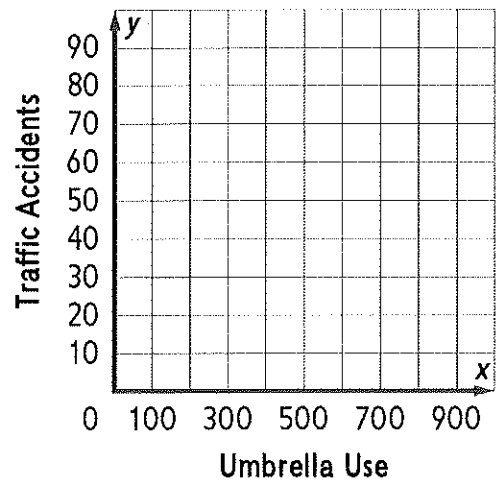


# 4-5 Practice

## Correlation and Causation

**1. UMBRELLAS AND ACCIDENTS** The table shows the average number of umbrellas used and the number of traffic accidents in a certain city per month from February through May in 2015. Graph the ordered pairs as a scatter plot (umbrella use, traffic accidents). Is the correlation positive or negative? Explain. Does the data illustrate causation? Explain.

Month	January	February	March	April	May
<b>Umbrella Use</b>	153	178	304	510	788
<b>Traffic Accidents</b>	26	34	59	68	85



**2. EXERCISE AND CALORIES** The table shows the number of minutes exercising on an elliptical and the number of calories Mark burned per day from Monday through Friday. Graph the ordered pairs as a scatter plot (minutes on elliptical, calories burned). Is the correlation positive or negative? Explain. Does the data illustrate causation? Explain.

Day	Monday	Tuesday	Wednesday	Thursday	Friday
<b>Minutes on Elliptical</b>	20	30	40	50	60
<b>Calories Burned</b>	204	310	425	505	615

