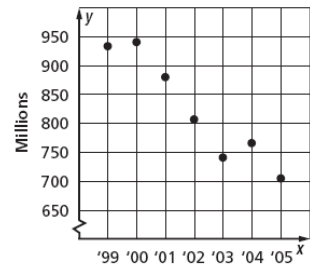


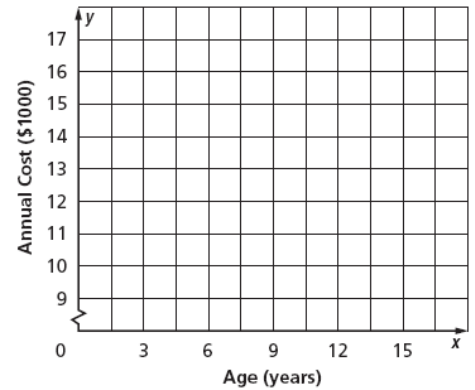
### Scatter Plots and Lines of Best Fit Worksheet

1. **MUSIC** The scatter plot shows the number of CDs (in millions) that were sold from 1999 to 2005. If the trend continued, about how many CDs were sold in 2006?



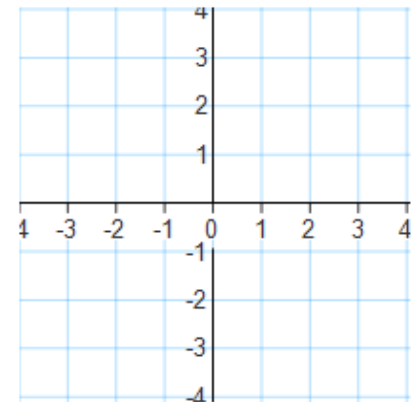
2. **FAMILY** The table below shows the predicted annual cost for a middle income family to raise a child from birth until adulthood. Draw a scatter plot and describe what relationship exists within the data.

Cost of Raising a Child Born in 2003					
Child's Age	3	6	9	12	15
Annual Cost (\$)	10,700	11,700	12,600	15,000	16,700



3. Make a scatter plot of the data in the table. Draw a line of best fit. What is the equation of the line of best fit?

X	-2	-2	-1	0	1	1	1	2	2	3
Y	2	3	2	1	0	1	-1	-1	-2	-2



4. **EDUCATION** The table at the right gives the number of hours spent studying for a science exam and the final exam grade.

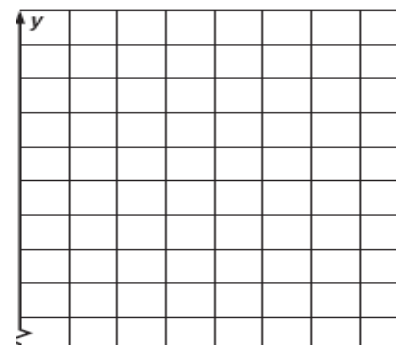
Study Hours	3	2	5	1	0	4	3
Grade	84	77	92	70	60	90	75

- a. Draw a scatter plot of the data and draw in the line of best fit.

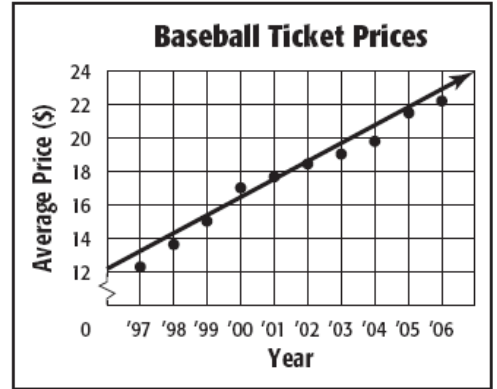
- b. What is the equation for the line of best fit?

- c. Predict the grade for a student who studied for 6 hours.

- d. Could this line go on forever? Why or why not?



5. **BASEBALL** The scatter plot shows the average price of a major-league baseball ticket from 1997 to 2006.
- a. Use the points (2001, 17.60) and (2002, 18.75) to write the slope-intercept form of equation for the line of fit shown in the scatter plot.

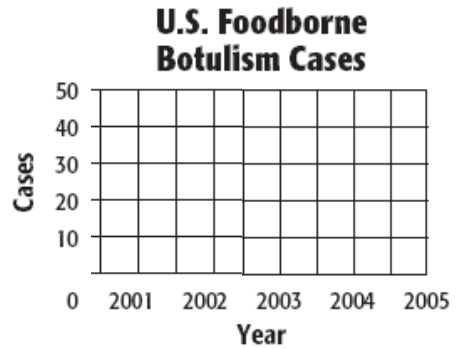


Source: Team Marketing Report, Chicago

- b. Use your equation to tell the price of a ticket in 2009. Is this extrapolation or interpolation?

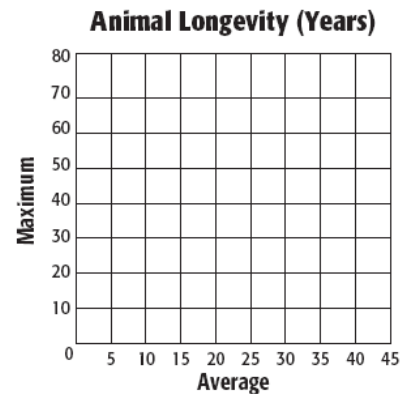
6. **DISEASE** The table shows the number of cases of Foodborne Botulism in the United States for the years 2001 to 2005.
- a. Draw a scatter plot and determine, what relationship, if any, exists in the data.
- b. Draw a line of fit for the scatter plot, and write the slope-intercept form of an equation for the line of fit.

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



7. **ZOOS** The table shows the average and maximum longevity of various animals in captivity.
- a. Draw a scatter plot and determine, what relationship, if any, exists in the data.

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



- b. Draw a line of fit for the scatter plot, and write the slope-intercept form of an equation for the line of fit.
- c. Predict the maximum longevity for an animal with an average longevity of 33 years. Is this an example of Extrapolation or Interpolation?