

Problem Set: 4.5

- The number of insurance policies written by Homeowners Mutual Insurance Company each year from 1991 to 2001 are shown in Display 4.51. Forecast the number of policies to be written in 2003 and 2004. Explain how you arrived at your answers.

Year	Number of Policies Written
1991	53,000
1992	59,820
1993	
1994	
1995	67,022
1996	73,724
1997	79,622
1998	81,215
1999	77,966
2000	80,123
2001	91,766

Insurance Policies Written

Display 4.51

- Owners of the Berlyn Cinema movie theater wanted to know how movie attendance varied by age, so they conducted a poll. Display 4.52 shows the results for 16 of the people polled.
 - Draw a scatterplot for the data. You will have to decide what scale is best.
 - Use a graphing calculator to determine the least-squares line for this data set and record the formula for the line. Draw the line on a scatterplot.
 - Using the formula from part (b), estimate how many movies a 15 year-old moviegoer would attend in a year. Discuss whether or not the estimate is reasonable. Include arguments for and against your estimate and the estimates of your classmates.

