

Homework Assignment 2: Due at the beginning of class 9/24/01

The table below gives the number of people (in thousands) receiving medicaid, and the payments made to medicaid vendors (in millions of dollars) between 1975 and 1997¹. (Questions 1 and 2 refer to the data in this table.)

Year	Number of recipients (thousands)	Total payments (millions of dollars)
1975	3615	4358
1981	3367	9926
1985	3061	14096
1990	3202	21508
1995	4119	36527
1996	4285	36947
1997	3954	37721

Table 1: Number of Recipients and Total Payments for Medicaid, 1973-1997.

1. Plot a graph that shows the average amount of money spent on each recipient of medicaid versus year for 1975-1997.
2. Using complete sentences, describe the trends that your graph shows.

The table shown below gives the percentage of American women (aged 15 and over) who have never been married from 1960 to 1998². (Questions 3 to 5 refer to the data contained in this table.)

Year	Percentage of women never married
1960	17.3
1970	22.1
1980	22.5
1990	22.8
1995	23.5
1998	24.7

Table 2: Percentage of US women never married, 1960-1998.

3. Use the data in the table given above to complete the table shown below.

Time interval	1960-1970	1970-1980	1980-1990	1990-1995	1995-1998
Rate of change					

Over which periods of time was the percentage of women who never married an increasing function? Over which periods of time was the percentage of women who never married a decreasing function? In each case, explain how you know.

¹ Source: Health Care Financing Administration, *2082 Report* (1999).

² Source: US Bureau of the Census, *Marital Status and Living Arrangements* (1999).

4. Over which periods of time was the percentage of women who never married a concave down function? Over which periods of time was the percentage of women who never married a concave up function? In each case, explain how you know.

5. Plot the percentage of women who never married versus year. Describe the appearance of your graph in words. On your graph, label the intervals of time that you found in Questions 3 and 4.