NAME _____

1. The table shows the percent P of public schools in the United States with access to the internet from 1994 to 2000. (Let $t = 4$ correspond to 1994)

Year	Percent, P
1994	35
1995	50
1996	65
1997	78
1998	89
1999	95
2000	98

   a. Find a quadratic model for the data.

   b. Is a quadratic model a good fit for this data? Explain.

   c. Use the model to determine when 100% of public schools will have internet access.

   d. Can the model be used to predict the percent of schools with internet access in the future? Explain.

2. The table shows the number H(in thousands) of hospitals in the United States for selected years from 1960to 2000. (Let $t = 0$ correspond to 1960)

Year	Hospitals, H
1960	6876
1965	7123
1970	7123
1975	7156
1980	6965
1985	6872
1990	6649
1995	6291
2000	5810

   a. Find a quadratic model for the data.

   b. Is a quadratic model a good fit for this data? Explain.

   c. Use the graph of the model to determine what year the number of hospitals reached a maximum.

   d. Do you think the model could be used to predict the number of hospitals in the future? Explain.

3. The table shows the sales S (in millions of dollars) for Guitar Center, Inc. from 1996 to 2002.
(Let $t = 6$ correspond to 1996)

Year	Sales, S
1996	213.3
1997	296.7
1998	391.7
1999	620.1
2000	785.7
2001	938.2
2002	1101.1

a. Find a linear model for the data.

b. Find a quadratic model for the data.

c. Determine which model best fits the data and use the model you chose to predict the sales for Guitar Center, Inc. in 2007.