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Name: _____   Grade: _____

Group Members Present:

_____ , _____ , & _____

1. The table shows the number of people undergoing laser eye surgery in a given year.

Year	1997	1998	1999	2000	2001
Million people	0.1	0.3	0.6	0.8	1.1

     a. Why is a linear model the appropriate choice for the data?

     b. Write a linear model.

     c. Write a sentence interpreting the slope of the model.

     d. When will the numbers of people undergoing laser eye surgery in a year reach 2,000,000? Write the answer rounded to three decimal places before rounding correctly for the context.

2. The number of cases of an STD diagnosed per 100,000 people yearly is given in the table below.

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Cases	20.1	16.7	13.1	10.2	8.0	6.2	4.3	3.2	2.6	2.4	2.2

     a. What type of concavity is suggested by the scatter-plot?

     b. What two models demonstrate the concavity suggested by the scatter-plot?

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c. Does the scatter-plot suggest either an upper or lower limiting value? If so, write the equation of the horizontal asymptote.

d. Find a model for the data set.

e. What is the percentage change for the model?

3. The table shows the number of wildfires in the United States between 1996 and 2000.

Year, x	1996	1997	1998	1999	2000
Wildfires, $w(x)$ (thousands)	115	90	81	94	123

a. Describe the concavity and end behavior of the scatter-plot.

b. Find a model for the data set.