Lung Transplants The table shows the number L of lung transplants in the United States for selected years from 1991 through 2013. The data can be approximated by the model

$L = 64.4t + 410, \quad 1 \leq t \leq 23$

where t represents the year, with $t = 1$ corresponding to 1991. (Data Source: U.S. Department of Health and Human Services)

Spreadsheet at LarsonPrecalculus.com

Year	Lung Transplants, L
1991	405
1993	667
1995	872
1997	932
1999	893
2001	1059
2003	1085
2005	1406
2007	1468
2009	1660
2011	1822
2013	1923

(a) Use a graphing utility to plot the data and graph the model in the same viewing window.

(b) Use the *value* feature or the *zoom* and *trace* features of the graphing utility to estimate the number of lung transplants in 1992, 2000, 2004, and 2012.

(c) Verify your estimates from part (b) algebraically.

(d) Use the *zoom* and *trace* features of the graphing utility to estimate when the number of lung transplants will be no more than 1000.

(e) Verify your result from part (d) algebraically.

(f) Do you believe that the model can be used to predict the number of lung transplants for future years? Explain your reasoning.