

**Bachelor's Degrees** The table shows the numbers  $B$  (in thousands) of bachelor's degrees earned by women in the United States from 2001 through 2012. The data can be approximated by the linear model

$$B = 26.47t + 690.6, \quad 1 \leq t \leq 12$$

where  $t$  represents the year, with  $t = 1$  corresponding to 2001. (Source: National Center for Education Statistics)

|   | Year | Bachelor's degrees, $B$ |
|---|------|-------------------------|
| Spreadsheet at<br>LarsonPreCalculus.com | 2001 | 712                     |
|   | 2002 | 742                     |
|   | 2003 | 776                     |
|   | 2004 | 804                     |
|   | 2005 | 826                     |
|   | 2006 | 855                     |
|   | 2007 | 875                     |
|   | 2008 | 895                     |
|   | 2009 | 916                     |
|   | 2010 | 943                     |
|   | 2011 | 982                     |
|   | 2012 | 1026                    |

- Use a graphing utility to plot the data and graph the model in the same viewing window.
- Use the model to approximate the number of bachelor's degrees earned by women for each year from 2001 through 2012.
- Compare the estimated to the actual data. Is the model a good fit for the data? Explain.
- What are the slope and  $y$ -intercept of the model? Interpret their meaning in the context of the problem.
- Use the model to predict the number of bachelor's degrees earned by women in 2018.