**Bachelor's Degrees** The table shows the numbers $B$ (in thousands) of bachelor's degrees earned by women in the United States from 2005 through 2016. The data can be approximated by the linear model

$B = 26.42t + 690.9, \quad 5 \leq t \leq 16$

where $t$ represents the year, with $t = 5$ corresponding to 2005.    (*Source:* National Center for Education Statistics)

| DATA Year | Bachelor's degrees, $B$ (in thousands) |
|---|---|
| 2005 | 826 |
| 2006 | 855 |
| 2007 | 875 |
| 2008 | 895 |
| 2009 | 916 |
| 2010 | 943 |
| 2011 | 982 |
| 2012 | 1026 |
| 2013 | 1053 |
| 2014 | 1068 |
| 2015 | 1082 |
| 2016 | 1099 |

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

(b) Use the model to approximate the number of bachelor's degrees earned by women for each year from 2005 through 2016.

(c) Compare the estimated to the actual data. Is the model a good fit for the data? Explain.

(d) What are the slope and $y$-intercept of the model? Interpret their meaning in the context of the problem.

(e) Use the model to predict the number of bachelor's degrees earned by women in 2022.