

STAT 221 Introduction to Probability and Statistics Winter 2012

Quiz 23

Taken on Tues Mar 6. You may work with a group of as many as 4 students, submitting one quiz with all names, provided that you all contribute to the work. You may use your notes. Also, please include your section number (8am: section 2, 9am: section 3) and “quiz 23” along with your name(s).

Two Cal Poly freshmen gathered data on a random sample of textbooks from El Corral in November of 2006. Two of the variables recorded were the price of the book and the number of pages that it contained. These data are in the Minitab worksheet `TextbookPrices.mtw`, available from our course webpage.

1. Identify the explanatory and response variables in this study.
2. Use Minitab to determine the equation of the least squares line for predicting price from number of pages. Report the equation, being sure to use good statistical notation.
3. Use the least squares line to predict the price of a 500-page textbook. Then do the same for a 1500-page textbook. Which prediction would you have more confidence in? Explain.
4. Interpret what the slope coefficient means in this context.
5. Determine the proportion of variability in textbook prices that is explained by knowing the number of pages in the book.