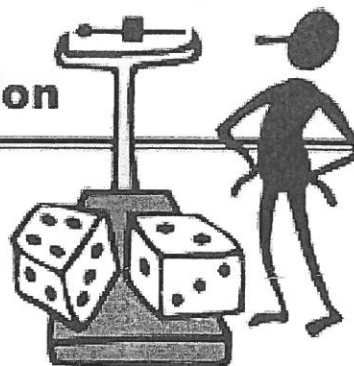


Chapter 27: Inferences for Regression



Key Vocabulary:

- true regression line
- standard error about the line
- degrees of freedom
- prediction interval

Calculator Skills:

- LinRegTTest

1. What is the equation for the *idealized regression line*? Label each part of the equation.
2. What is the equation for the *least-squares regression line*? Label each part of the equation.
3. What are the four assumptions and conditions that must be met in order to perform inference for regression? Explain how to check each one.
4. What three aspects of the scatterplot affect the standard error of the regression slope?

5. If there is no association between two variables, what should be the value of the slope of the regression line?
6. When performing inference on the regression slope, what are the null and alternative hypotheses?
7. How many degrees of freedom does the standardized estimated regression slope have?
8. What is the formula for constructing a confidence interval for the regression slope β ?
9. How is this similar to the formula for constructing other confidence intervals?
10. If you want to test for no correlation between your variables x and y , what should be used for the null hypothesis?
11. When using the LinRegTTest on the TI-83+, what does the symbol ρ represent?

