

Assignment #4, Stat 1001, Fall 2009

Reading

Chapters 7 and 8. This assignment is due in class on Wednesday, October 16, 2009.

Problems

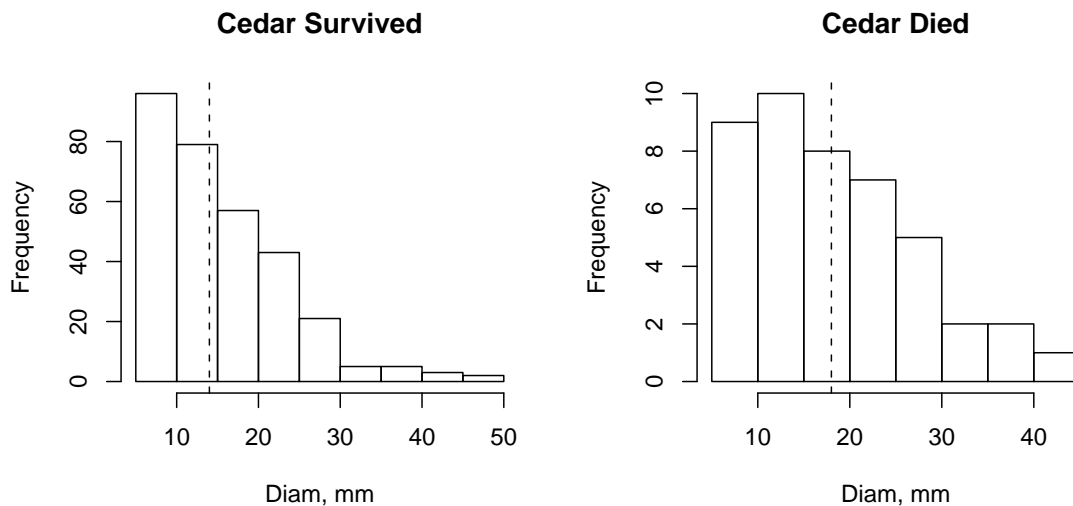
Problems from the book

Do the following problems from Chapter 7: 9*, 12, 13*, 18, 19, 25*, 26. The questions on boxplots and histograms are also for Chapter 7.

Do the following problems from Chapter 8: 1, 2*, 3, 4*, 5, 6, 14, 17, 22

Questions about histograms and boxplots

Answer several questions based on the graphs given below. On July 4, 1999, a major windstorm blew down many trees in the Boundary Waters Canoe Area Wilderness. As part of a study to understand the blowdown, a graduate student collected data on thousands of trees in hard-hit areas. The first figure gives histograms for the 311 Cedars that survived, the 44 cedars that died. The dashed line indicates the median.



1. Was the largest diameter tree measured a survivor or a death?
2. Which group has a larger median, the survivors or the deaths?

3. Is the distribution of diameters for the trees that died survived skewed to the left, skewed to the right, or approximately symmetric?
4. For the cedars that died, will the median be larger than the mean, smaller than the mean or about equal to the mean? Why?
5. Which distribution is more variable (has larger standard deviation), the survivors or the deaths?
6. Write a sentence or two that summarizes the differences between the survivors and the deaths. For example: which tend to be bigger? which are more variable? what diameter trees are most likely to blowdown? least likely?
7. The figure below also provides a view of the Cedar samples from the blowdown, this time as parallel boxplots. For learning about the shape of a distribution, which is easier to use, the histogram or the boxplot, and why? For comparing two or more groups, which is easier, the histogram or the boxplot and why?

