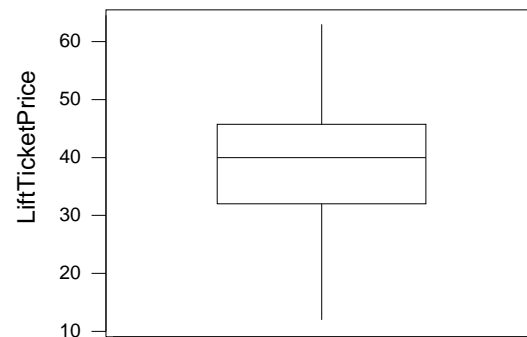


## Practice Quiz 2

Statistics 200

Dr. Nancy Pfenning

1. (7 pts.) This boxplot shows prices for adult weekend ski lift tickets in various resorts in the Middle Atlantic States for the winter of 2004.



- (a) The shape is (i) noticeably skewed to the left (ii) approximately symmetric (iii) noticeably skewed to the right
- (b) Which of these is your best guess for the interquartile range ( $IQR = Q3 - Q1$ )? (i) 15 (ii) 25 (iii) 35 (iv) 50
- (c) Suppose price is included for a new resort that only charges \$10 for a lift ticket. How would this affect the mean? (No calculations necessary.) (i) decrease it (ii) no effect (iii) increase it
- (d) Suppose price is included for a new resort that only charges \$10 for a lift ticket. How would this affect the standard deviation? (No calculations necessary.) (i) decrease it (ii) no effect (iii) increase it
- (e) Tell how we denote the mean \_\_\_\_\_ and standard deviation \_\_\_\_\_ if the values only constitute a sample, and how we denote mean \_\_\_\_\_ and standard deviation \_\_\_\_\_ if the values are for all Middle Atlantic ski resorts.

2. (3 pts.) In a sample of resumes, 7 percent of applicants described themselves as being a “team player”.
- (a) The unknown proportion of *all* resumes that describe applicants as team players is (i) a statistic denoted  $p$  (ii) a statistic denoted  $\hat{p}$  (iii) a parameter denoted  $p$  (iv) a parameter denoted  $\hat{p}$
  - (b) Which of these would help to convince you that the proportion for all resumes is close to 0.07:
    - i. A very large representative sample was used.
    - ii. The sample included only resumes applying for management positions.
    - iii. Both (i) and (ii).
    - iv. Neither (i) nor (ii).
  - (c) The study also considered what percentage of applicants claimed to have “communication skills”. Explain why a single piechart is not enough to display percentages with regards to being a team player and having communication skills.