

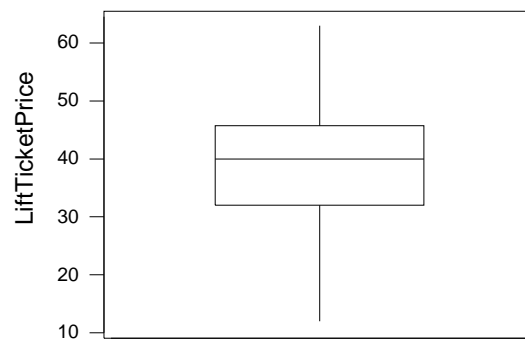
Practice Quiz 2

Statistics 200

Fall 2007

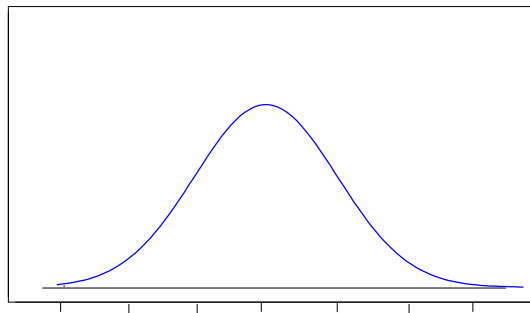
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1. (3 pts.) This boxplot shows prices for adult weekend ski lift tickets in a small sample of resorts in the Middle Atlantic States for the winter of 2004.



- (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. (2 pts.) In a sample of resumes, 7 percent of applicants described themselves as being a “team player”.
- The unknown proportion of *all* resumes that describe applicants as team players is
 - a statistic denoted p
 - a statistic denoted \hat{p}
 - a parameter denoted p
 - a parameter denoted \hat{p}
 - Which of these would help to convince you that the proportion for all resumes is close to .07:
 - A very large representative sample was used.
 - The sample included only resumes applying for management positions.
 - Both (i) and (ii).
 - Neither (i) nor (ii).
 - 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.
3. (5 pts.) Adult male hip sizes are normally distributed with mean 37.8 inches and standard deviation 2.6 inches.
- Use the 68-95-99.7 Rule to fill in numbers for the seven indicated points of the horizontal axis on this curve showing the distribution of hip sizes.



- Male Hip Sizes
- Almost all hip sizes (99.7%) are between _____ and _____.
 - The smallest 16% are less than how many inches?
 - What percentage are more than 43 inches?
 - Find the z score for a hip size of 40 inches.
 - A hip size of 40 inches could be considered
 - extremely small
 - somewhat small
 - somewhat large
 - extremely large
 - In reality, the shape of the distribution of male hip sizes is not exactly normal. Is it skewed left or skewed right?