

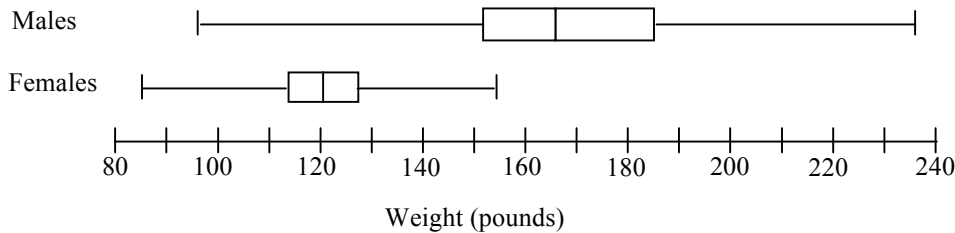
Math 2311

EMCF Homework 2 (Sections 1.5 & 2.1)

Instructions

- Homework will NOT be accepted through email or in person. Homework must be submitted through CourseWare BEFORE the deadline.
 - Submit this assignment at <http://www.casa.uh.edu> under "EMCF" and choose **ehw2**.
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1. The weights of male and female students in a class are summarized in the following boxplots:



Which of the following is NOT correct?

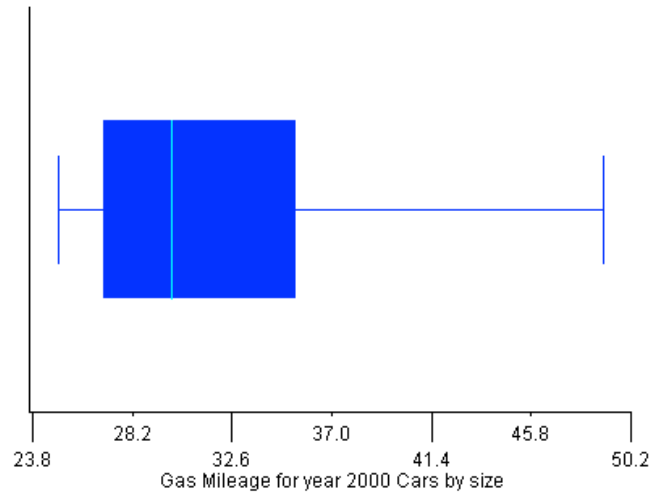
- The male students have less variability than the female students.
 - About 50% of the male students have weights between 150 and 185 lbs.
 - About 25% of the female students have weights more than 128 lbs.
 - The median weight of the male students is about 166 lbs.
 - The mean weight of the female students is about 120 because of symmetry.
2. The following is a stem-plot of the birth weights of male babies born to the smoking group. The stems are in units of kg.

Stems	Leaves
2	3,4,6,7,7,8,8,8,9
3	2,2,3,4,6,7,8,9
4	1,2,2,3,4
5	3,5,5,6

The median birth weight is:

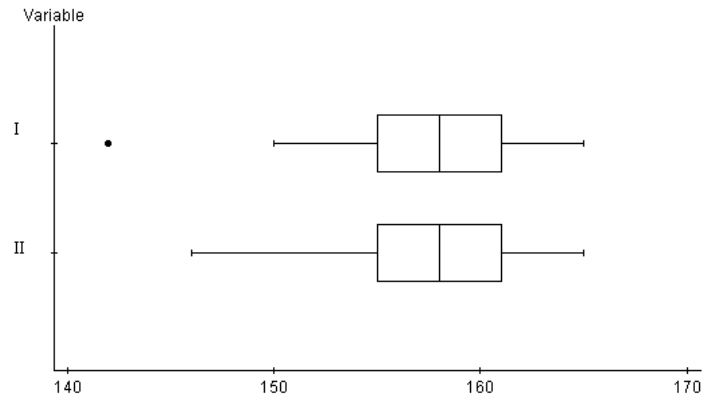
- 35 kg
- 3.2 kg
- 3.5 kg
- 3.7 kg
- none of these

3. The distribution that has the box plot shown could be described as



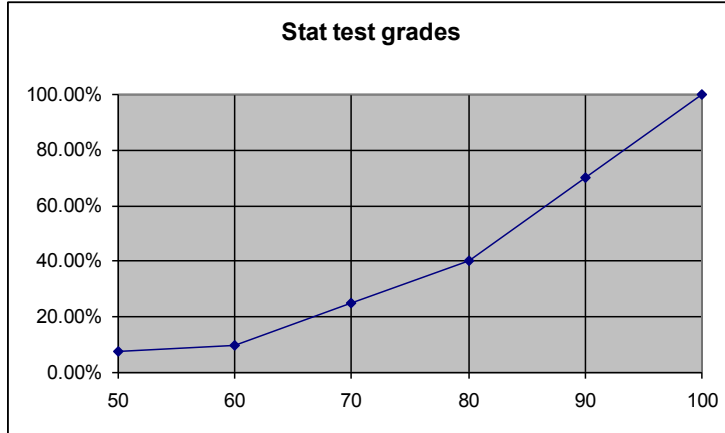
- a. roughly symmetric but with outliers
- b. skewed left
- c. skewed right
- d. uniform
- e. bell shaped

4. The boxplots shown below summarize two data sets, I and II. Based on the boxplots, which of the following statements about these two data sets CANNOT be justified?



- a. Data set I and data set II have the same number of data points.
- b. The range of data set I is greater than the range of data set II.
- c. The interquartile range of data set I is equal to the interquartile range of data set II.
- d. The median of data set I is equal to the median of data set II.
- e. All of the above are valid statements.

5. The figure below shows a **cumulative** relative frequency histogram of 40 scores on a test given in an AP Statistics class. Which of the following conclusions can be made from the graph?



- If the passing score is 70, most students did not pass the test.
- There is greater variability in the lower 20 test scores than in the higher 20 test scores.
- The median test score is less than 70.
- Sixty percent of the students had a test score above 80.
- The horizontal nature of the graph for test scores of 60 and below indicates that those scores occurred most frequently.

Use the following data for questions 6 - 8. A survey was conducted to gather ratings of the quality of service at local restaurants. Respondents rated on a scale of 0 (terrible) to 100 (excellent). The data are represented by the following stem plot. A calculator should not be necessary for #8 - 10.

3	2 4	
4	0 3 4 7 8 9 9 9	
5	0 1 1 2 3 4 5	stem = tens
6	1 2 5 6 6	leaves = ones
7	0 1	
8		
9	2	

- The median response was
 - 49
 - 50
 - 51
 - 62
 - cannot be determined
- The mean of these data is
 - an integer
 - less equal to the median
 - than the median
 - greater than the median
 - cannot be determined
- The value of 92 is
 - the maximum but not an outlier.
 - the maximum and an outlier.
 - one of two outliers.
 - not a data value.
 - none of these.

9. In how many ways can the four symbols * ! @ # & be arranged?
- 4
 - 24
 - 120
 - 12
 - none of these
10. In how many ways can 7 cars be parked in a row?
- 40320
 - 5040
 - 8
 - 32
 - none of these
11. In how many ways can seven people be seated around a circular table?
- 5040
 - 720
 - 42
 - 40320
 - none of these
12. How many different words (they do not have to be real words) can be formed from the letters in the word MAMMAL?
- 720
 - 120
 - 60
 - 30
 - none of these
13. In how many ways can you write 3 letters on a tag using each of the letters A, B, C, D, and E with repetition?
- 125
 - 60
 - 120
 - 15
 - none of these
14. In how many ways can you write 3 letters on a tag using each of the letters A, B, C, D, and E without repetition?
- 125
 - 60
 - 120
 - 15
 - none of these
15. In how many ways can a committee of 3 be chosen from a group of 7 people?
- 343
 - 210
 - 35
 - 21
 - none of these