

Take your time and make sure you follow all instructions. Where necessary, work must be shown in order to receive partial credit. Include input into the calculator in order to receive partial credit.

1. Identify the following variables as Categorical or Quantitative. [2 pts each]
- a) The number of hours of television a student watches in a week.
  - b) Customer's order number from an online merchant.
  - c) A student's major.

2. The following table shows the breakdown of the gender of students participating in spring intramural sports at a university versus their favorite sport. .

FAVORITE SPORT	GENDER	
	Female	Male
Basketball	70	90
Soccer	80	40
Volleyball	60	30

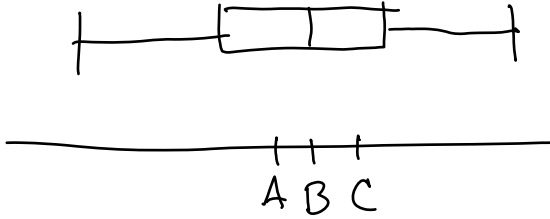
- a) What percent of students playing intramurals at the university favor volleyball? [4 pts]
- b) What percent of female students favor soccer? [4 pts]
- c) What percent of those that favor basketball are male? [4 pts]

[3 pts each graph]

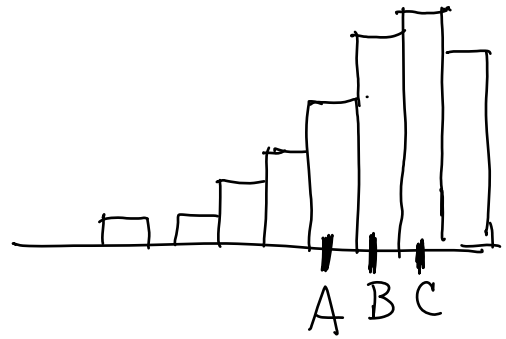
3. For the given graphs determine the following information:

- Is the distribution symmetric, skewed to the left, or skewed to the right?
- Which letter represents the location of the MEDIAN?
- Which letter represents the location of the MEAN?

a)



b)



4. Calculate the standard deviation for the following numbers by filling in the table below AND using the formulas discussed in class. (Work must be shown in order to receive ANY credit) [12 pts]

$x$	$x - \bar{x}$	$(x - \bar{x})^2$
2		
7		
9		
10		

5. A city's high temperatures (in degrees Fahrenheit) for a 2 week period in January are given below:

[34 pts]

13 30 31 33 34 34 36 39 41 41 45 48 51 55

- a) Construct a regular stem and leaf plot.
- b) Use your calculator features to find the Mean and the Standard Deviation for the temperatures.
- c) Determine the Five-Number Summary and construct a boxplot.

6. The weight of adult coyotes in an area are normally distributed with a mean of 32.5 pounds and a standard deviation of 4.2 pounds. Answer the following using either the Normalcdf or InvNorm commands on your calculator. Show commands entered into the calculator for partial credit.

[6 pts each]

- a) What is the weight of a coyote with a z-score of 1.8?
- b) What percent of adult coyotes weigh between 30 pounds and 40 pounds?
- c) What percent of adult coyotes weigh over 35 pounds?
- d) The lowest 20% of adult coyotes weigh below what value?
- e) The middle 75% of adult coyotes weigh between what values?