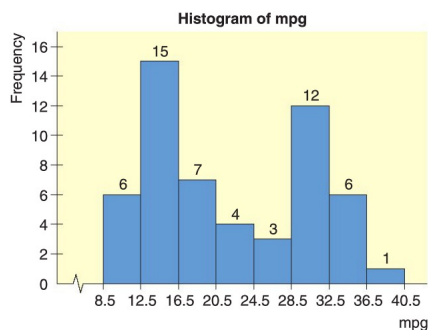


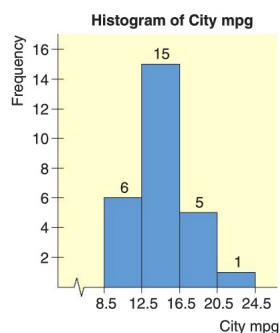
In-class Worksheet 2

1. Shown here is a histogram displaying the mileage, in miles per gallon, for a random selection of passenger cars.

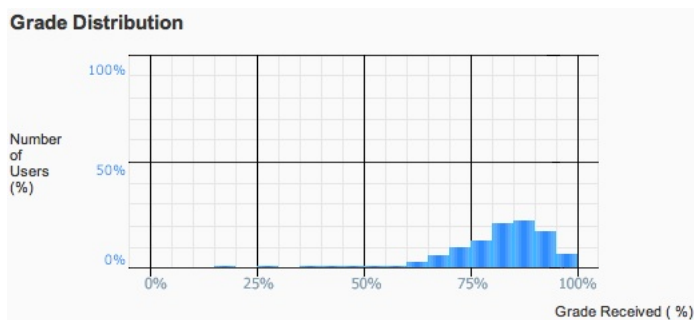


- (a) How many total data values were used to create this histogram?
- (b) What is the most common range of “miles per gallon” for a passenger cars in this sample?
- (c) Describe the shape of this distribution. (Mound-shape symmetrical, Uniform, Skewed left, Skewed right, Bimodal).
- (d) Curious about the bimodal shape of the distribution above (Is this consistent with your answer just above?), Jose did some research and found that this distribution included both city and highway mileage for each car in the sample. Looking at the raw data, Jose discovered the following histogram displays the the City Mileage for the cars in the sample.

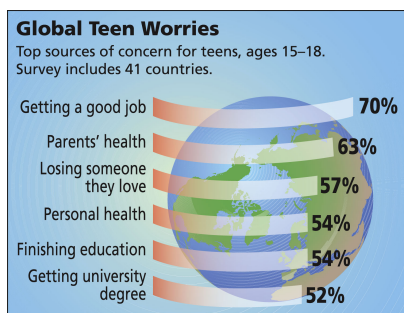
Use the information from the two histograms to draw a histogram for the Highway Mileage. (Use class boundaries consistent with the two histograms already shown.)



2. Shown here is the relative frequency histogram (from D2L) of the overall course totals for MATH 1081 in Spring 2013 (600 students).

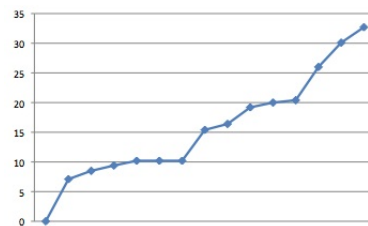
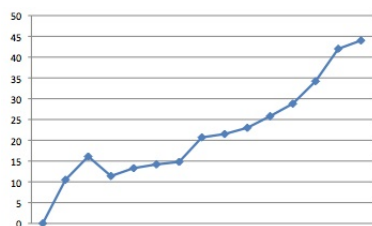


- (a) Describe the shape of this distribution. (Mound-shape symmetrical, Uniform, Skewed left, Skewed right, Bimodal).
- (b) Approximate the number of students that earned a 80% or higher in the class.
3. Use the following figure to answer the questions below.



- (a) Is this a bar graph? Why or why not?
- (b) Could the same information be displayed in a Pareto chart? Explain.
- (c) Could the same information be displayed in a circle graph? Explain.

4. Without proper context and labels, ogives and time-series graphs can look very similar. Given here are two different graphs (both intentionally lacking labels and context). In *each* case determine if the graph can possibly represent an ogive and if it can possibly represent a time-series graph. Explain. (Note, I am not saying that one IS an ogive and one IS a time-series. For each graph decide if either, both, or neither option of “ogive” or “time-series” is possible and explain why or why not.)



5. Using a *back-to-back* stem-and-leaf display, separate sets of data can more easily be compared. Consider the following display for Midterm scores for two different sections of the same class.

1 4 0 = 41 in Section 1 and 40 in Section 2		
SECTION 1		SECTION 2
7 4 3 1	4	0 0 1
9 8 8 7 7 5 5 3 1 1	5	
6 5 4 4 1 0	6	4 4 5 5 5 7 8 8 9 9
0 0	7	0 1 1 3 5 5 5 6 6 7 8
8 8 6 5	8	0 0 2 5 5
9 9 7 7 5 5 5	9	
0 0	10	0 0

- How many students took the Midterm in each section?
- What are the highest and lowest scores earned in Section 1? in Section 2?
- What is the score with the highest frequency of occurrence in Section 1? in Section 2?
- Which section displays a more *consistent* understanding of the material? Explain.
- Which section displays a more *consistent* understanding of the material? Explain.