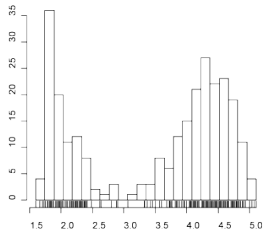
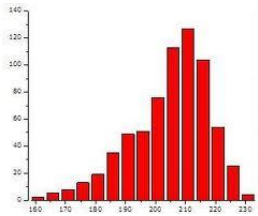
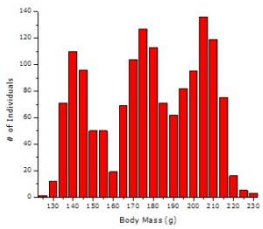
Name: Period: Date:

Probability & Statistics – Describing Quantitative Data – Worksheet 1

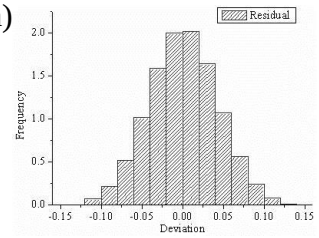
1. Describe the shape of each graph as Unimodal, Bimodal, or Multimodal.

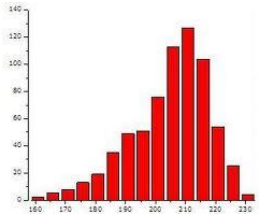
a) 

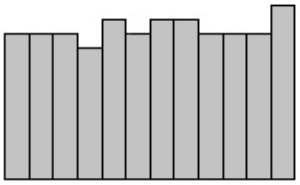
b) 

c) 

2. Describe the shape of each graph as Uniform, Symmetric, or Skewed.

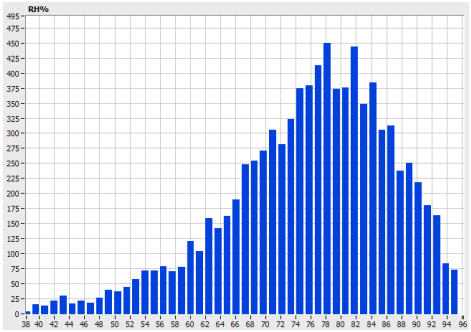
a) 

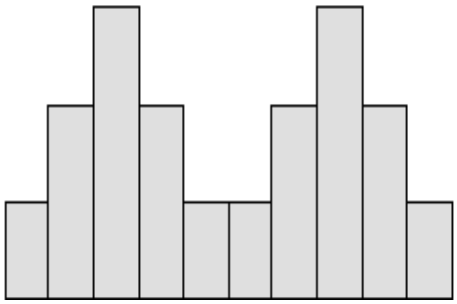
b) 

c) 

3. The measure of the center of a histogram can sometimes be misleading. In a couple of sentences, identify the shape of histograms where the measure of center can be useful and identify the shape of histograms where the measure of center can be misleading.

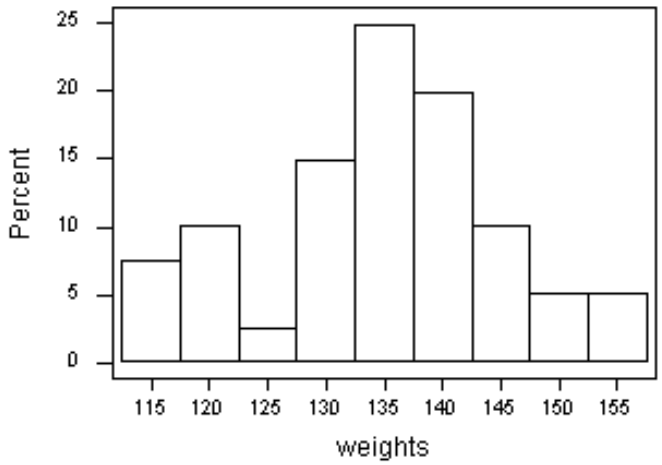
4. In a couple of sentences, describe the shape of the following histograms. (Use words like unimodal, bimodal, multimodal, uniform, symmetric, skewed left, or skewed right in your description.)

a) 

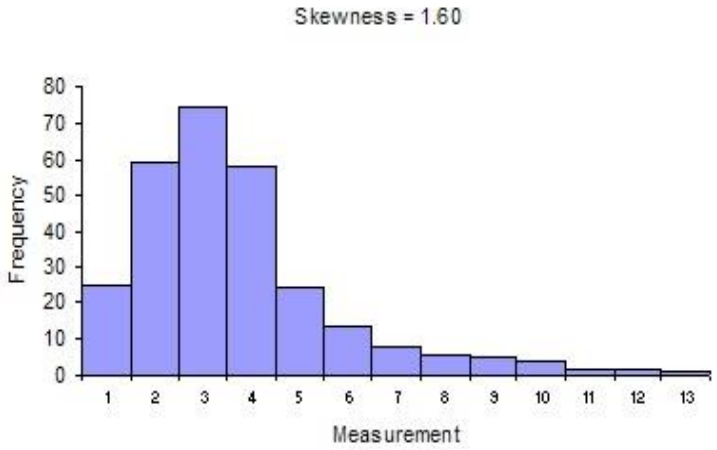
b) 

5. Identify the center of the following graphs.
(Use the number or range of numbers in the center)

a)

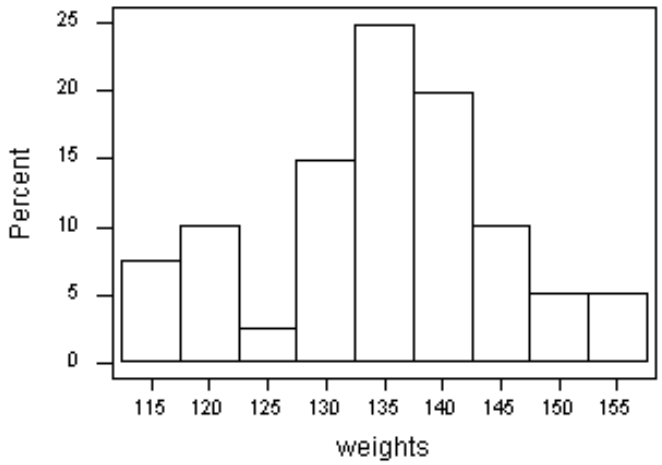


b)

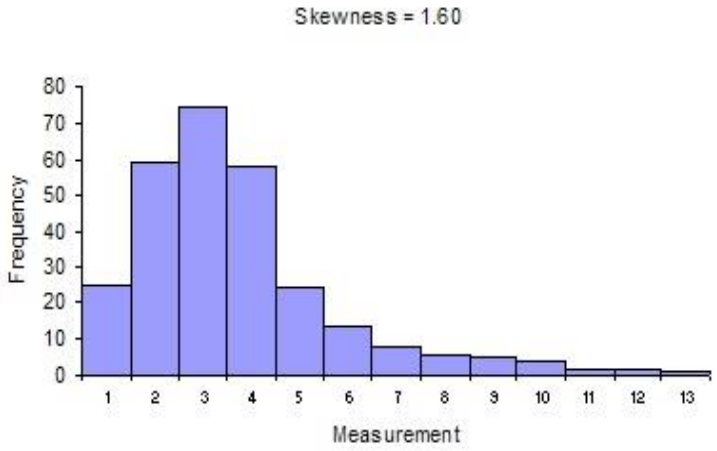


6. Identify the approximate maximum and minimum values of each graph, then calculate the range for each set of data.

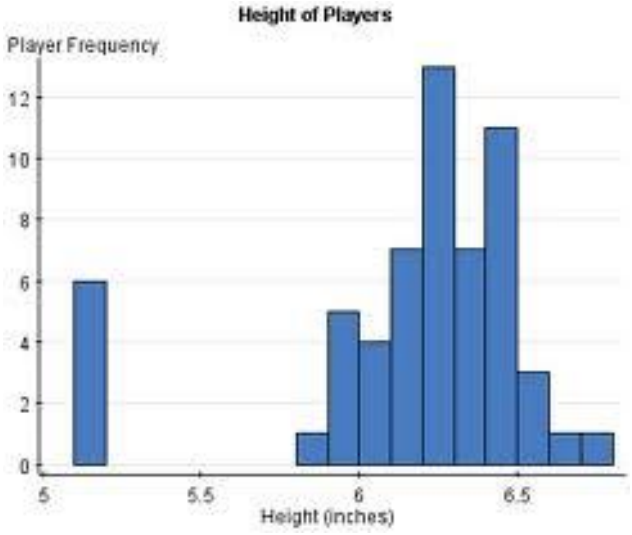
a)



b)

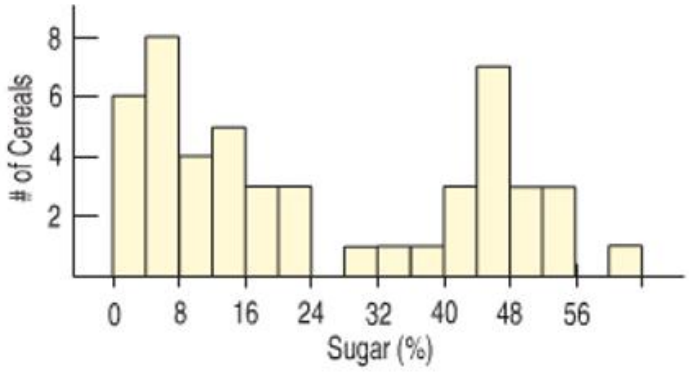


7. Describe any unusual (or special) features of the graph to the right.



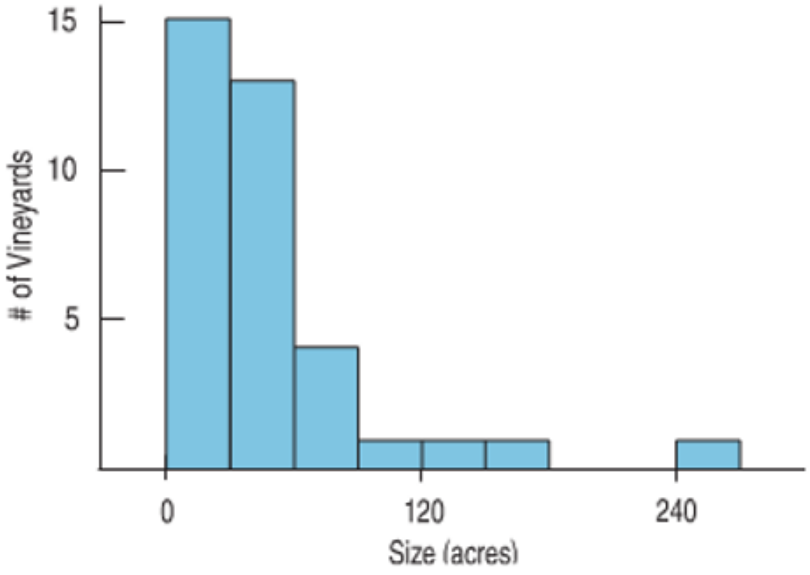
*When describing distributions below include shape, center, spread, and special features; be very specific. Include what is happening as well as **where** it is happening. Remember, a picture is worth a thousand words.*

8. **Sugar in cereals.** The histogram displays the sugar content (as a percent of weight) of 49 brands of breakfast cereals.



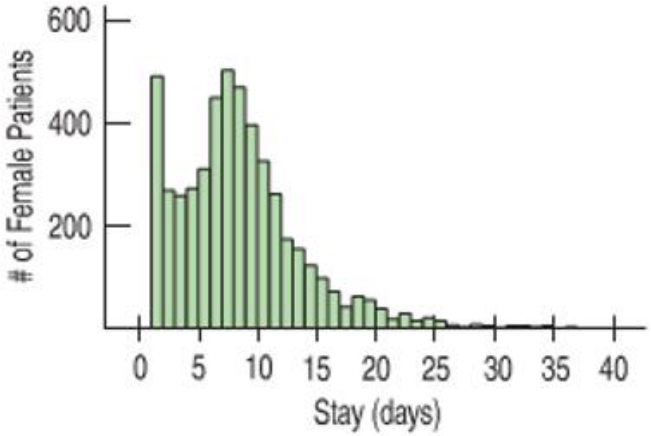
a) Describe the distribution. (shape, center, spread, unusual features)
b) What (in real life) do you think might account for this shape?

9. **Vineyards.** The histogram shows the sizes (in acres) of 36 vineyards in the Finger Lakes region of New York.



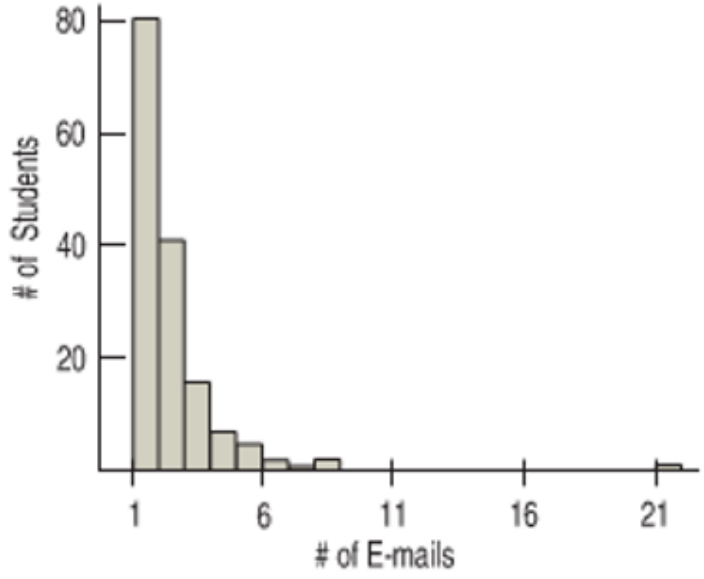
a) Describe the distribution. (shape, center, spread, unusual features)
b) Approximately what percentage of these vinyards are under 60 acres?

10. **Heart attack stays.** The histogram shows the lengths of hospital stays (in days) for all the female patients admitted to hospitals in New York during one year with a primary diagnosis of acute myocardial infarction (heart attack).



a) Describe the distribution. (shape, center, spread, unusual features)
b) From the histogram, would you expect the mean or median to be larger? Explain.
c) Why do you think there are so many people who stay for only one day?

11. **E-mails.** A university teacher saved every e-mail received from students in a large Introductory Statistics class during an entire term. He then counted, for each student who had sent him at least one e-mail, how many e-mails each student had sent.



a) Describe the distribution. (shape, center, spread, unusual features)
b) From the histogram, would you expect the mean or median to be larger? Explain.