MAT 223, Discussion Questions 9.09

1. Explain in your own words why we need to understand how to read graphs.

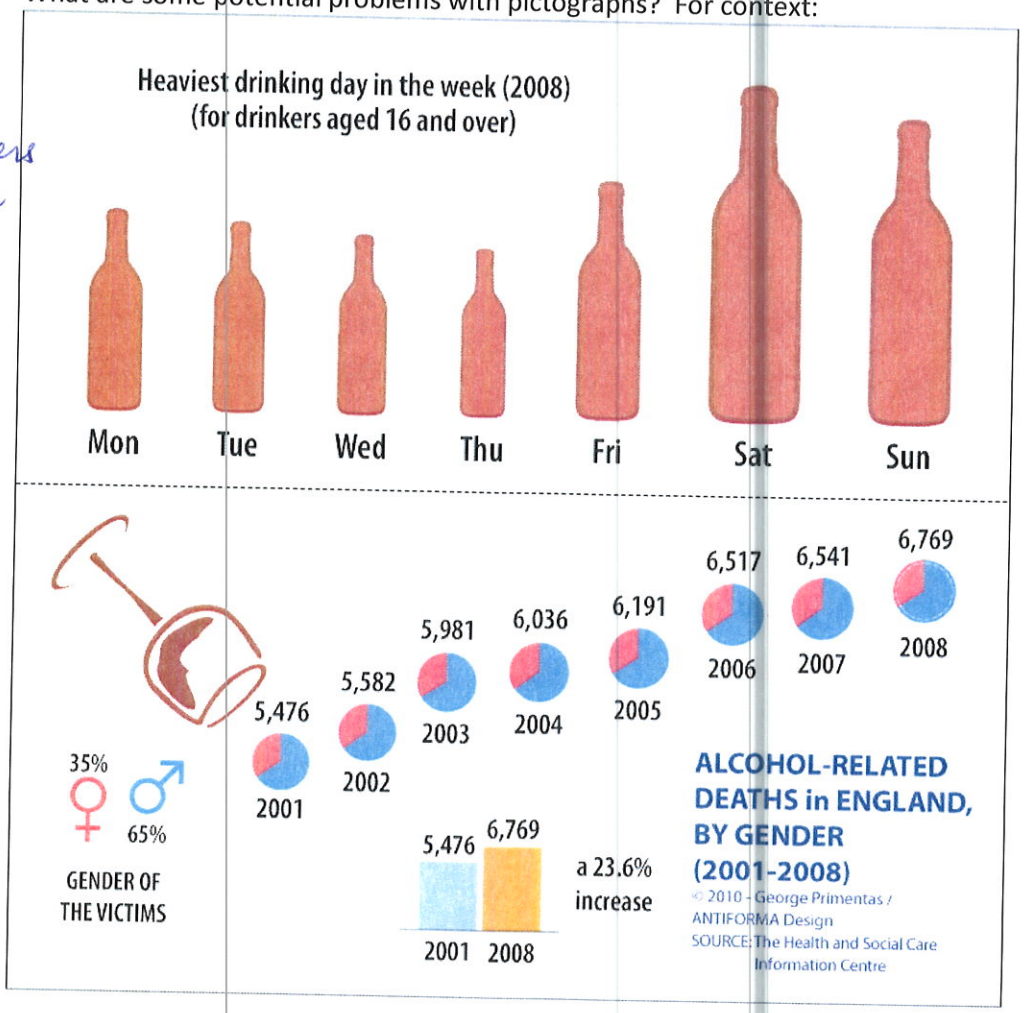
We don't process numbers directly very well, but do process visual relationships quickly. But they can be deceiving so we still need to think about them critically.

2. What is the difference between a time series graph and a cross-sectional graph?

a time-series graph tends to measure how one thing changes over time. Cross sectional graphs are a snapshot in time

3. What are some potential problems with pictographs? For context:

Sat drinkers don't drink that much more than Thursday drinkers - scales by area rather than just height

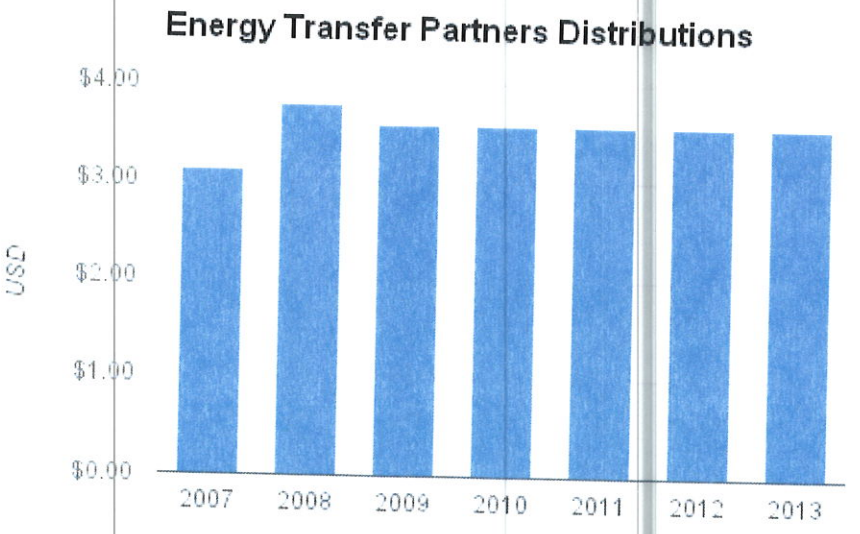


4. Give one reason why the scale of a graph matters.

mis-scaled graphs (or ones lacking a scale) can be misleading

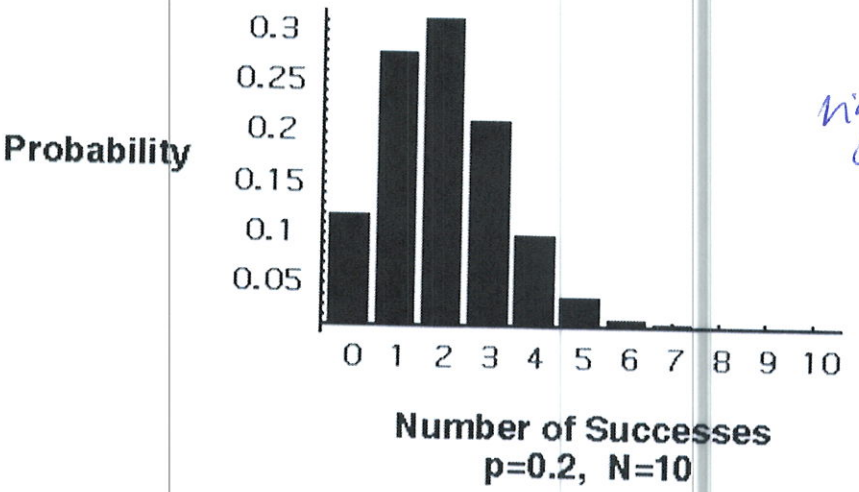
5. Classify each of the distributions/graphs below as roughly 1) uniform, 2) symmetric, 3) skewed left, 4) skewed right, or maybe none of these.

a.



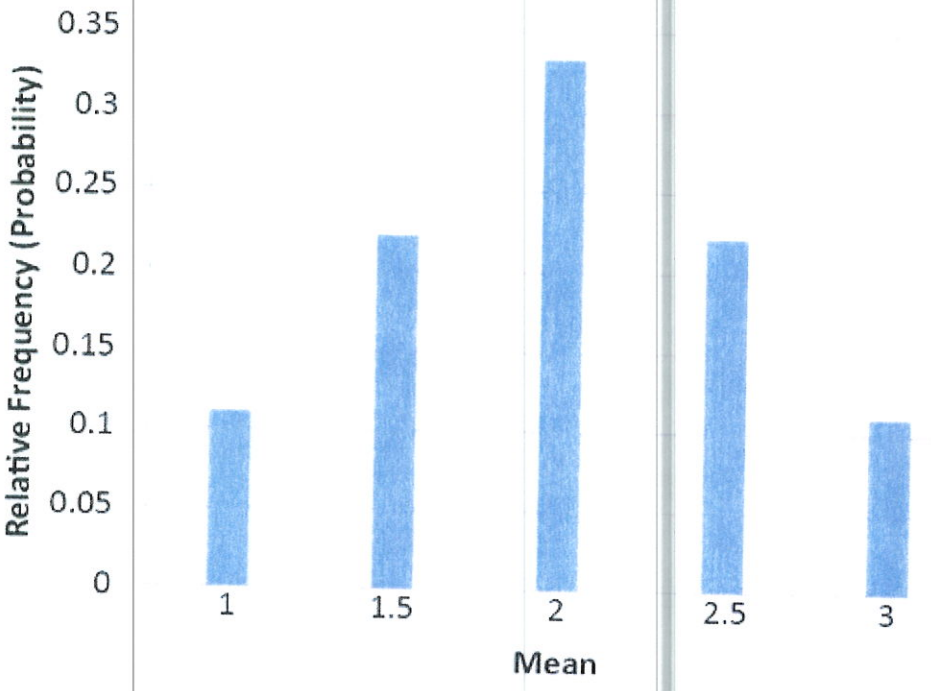
uniform

b.

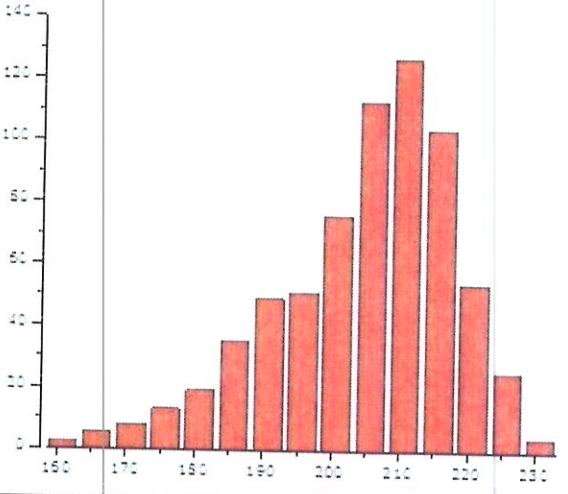


right skewed

Symmetric

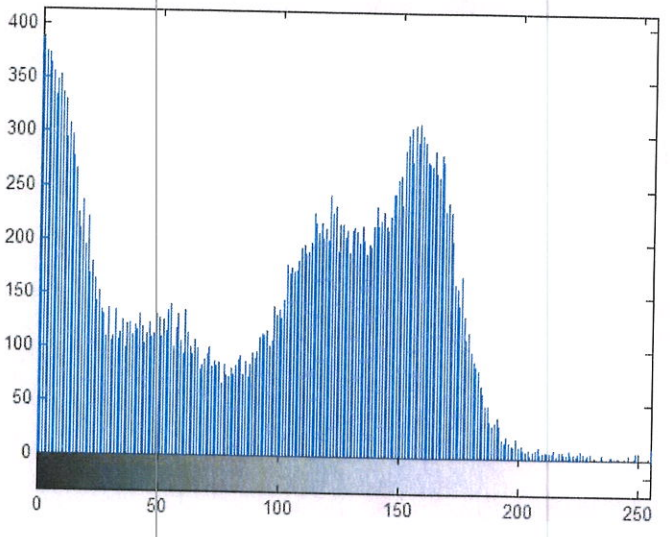


c.



left-skewed

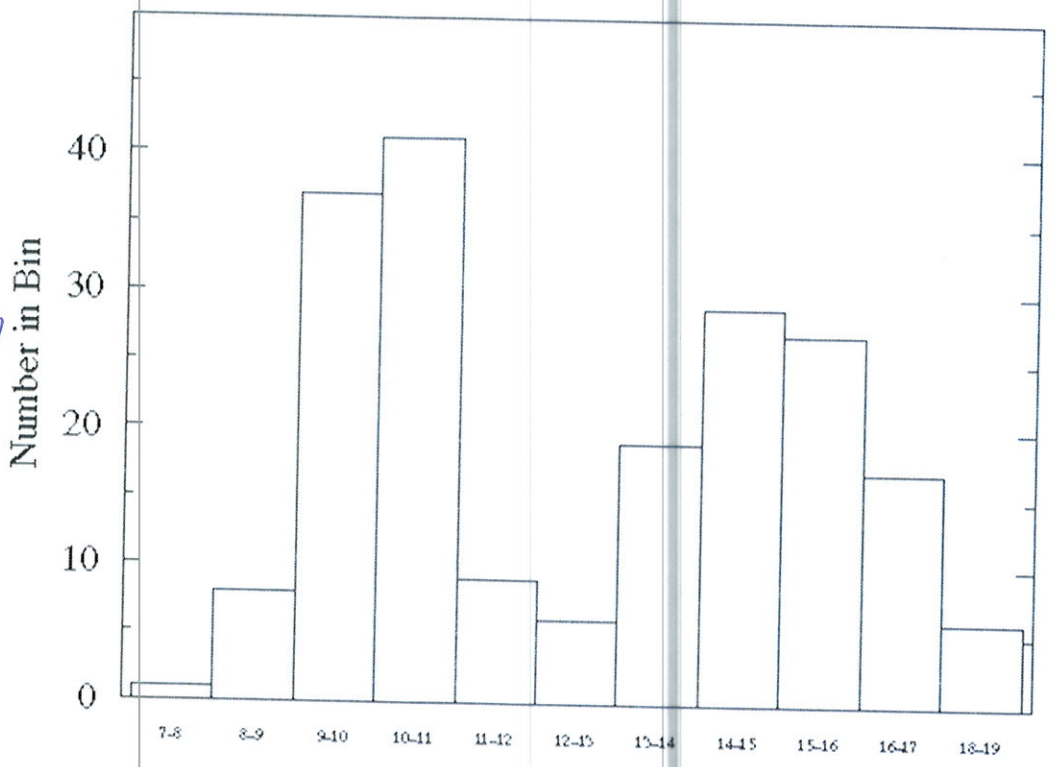
d.



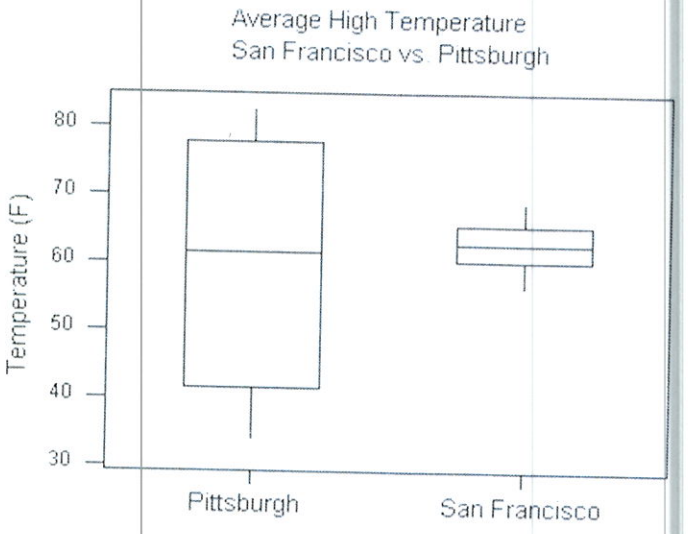
more of these

e.

none or possibly roughly symmetric if bimodal

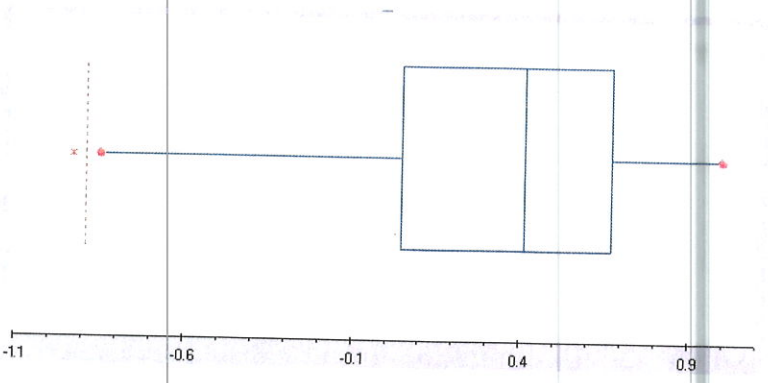


f.



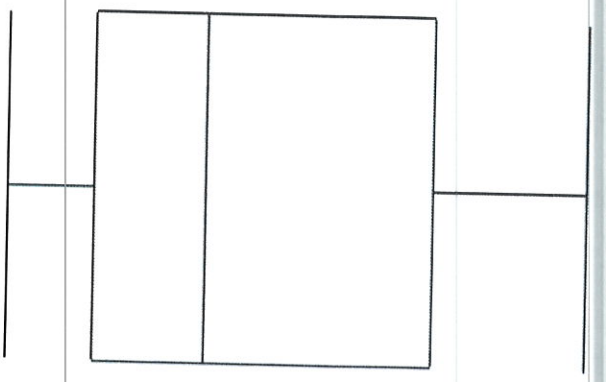
g.

both roughly symmetric



h.

left-skewed



right skewed

i.

6. When analyzing graphs, what 4-5 things should you be looking for in each graph? (If you prefer, you can give 1-2 things per graph type, for 4-5 different types.)

are the axes labeled? Does the graph have a title? does it have a legend or key? Is the graph type appropriate for the data?

answers will vary

7. Read the article at http://thejournal.com/articles/2015/08/17/early-results-from-common-core-tests-show-academic-gains.aspx and comment on the potential flaws on the article. What kind of graph(s) would be useful to see the effects claimed by the article.