MAT 135, Discussion Questions 2.03

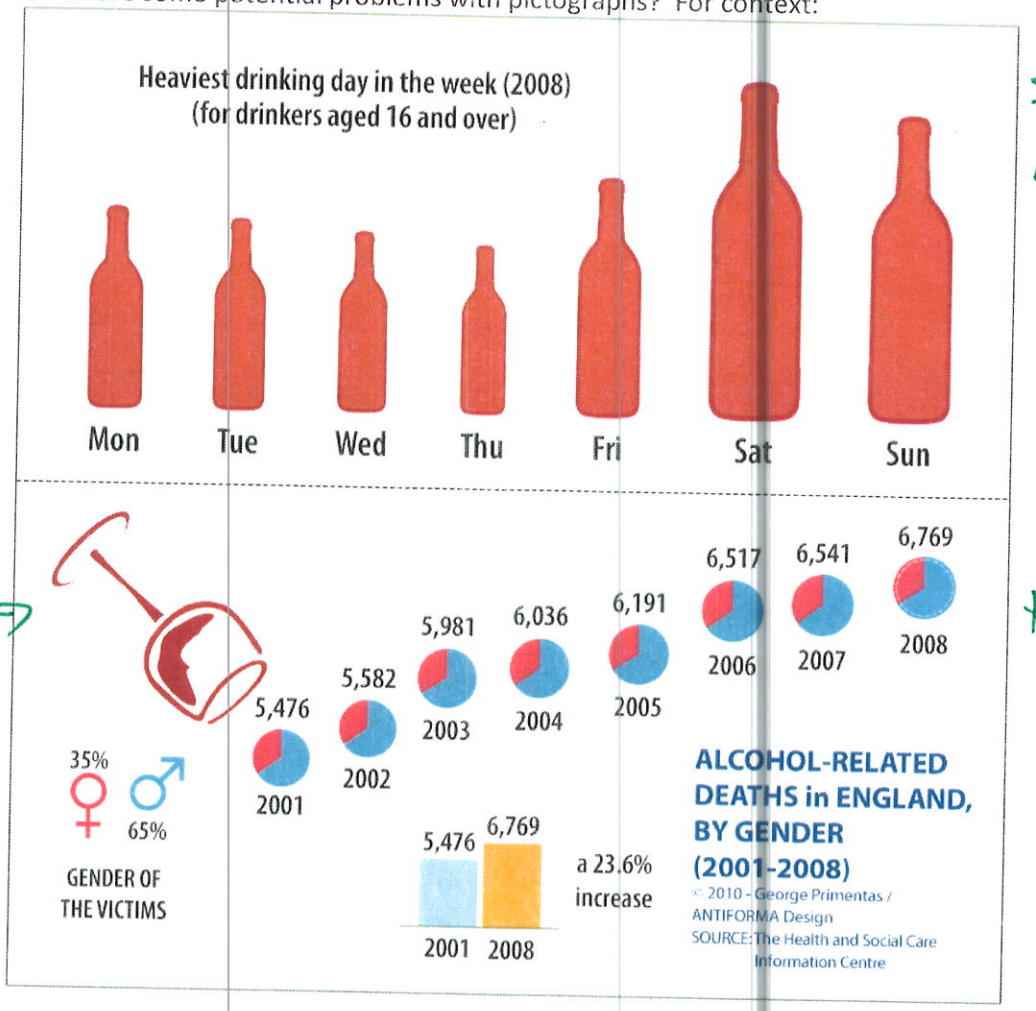
1. Explain in your own words why we need to understand how to read graphs.

easier to read than raw data
overcome misleading displays
apply data in graphs

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

time series shows data collected over time
cross-sectional happens at a single point in time
or not time-dependent

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



scaling
missing labels

too clever
no new info

too much info

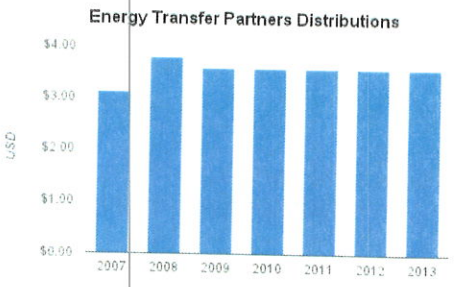
4. Give one reason why the scale of a graph matters.

may be visually misleading w/o it

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.

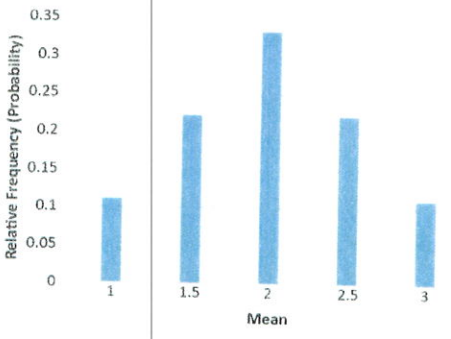
uniform

a.



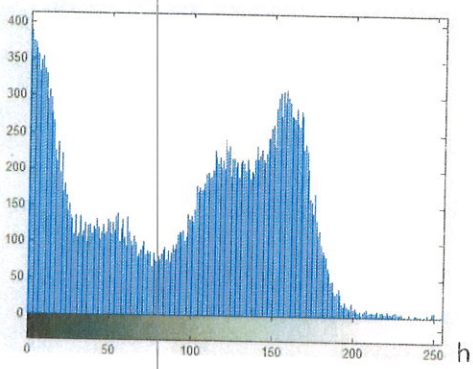
Symmetric

b.

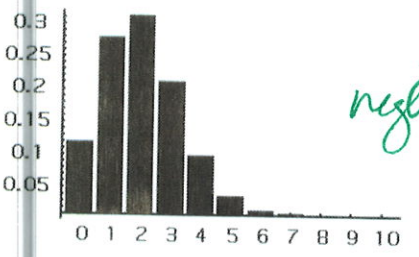


none

c.



f.

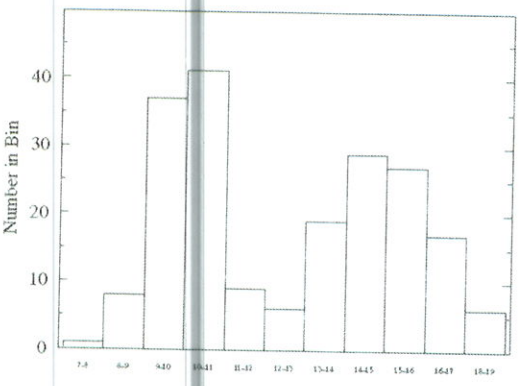


right skewed

g.

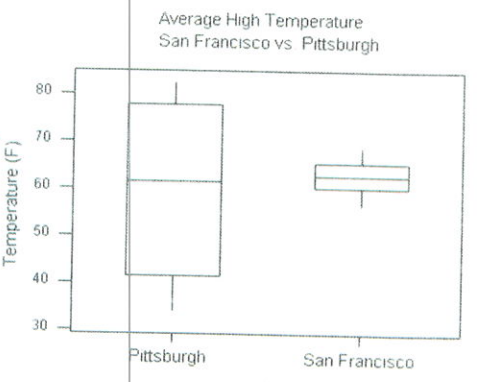
left skewed

h.



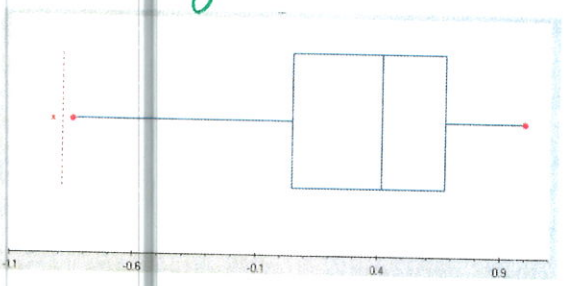
possibly roughly symmetric or none

Symmetric

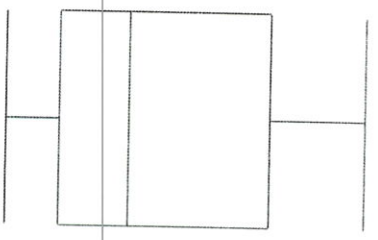


d.

left skewed



i.



e.

right skewed

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.)

title
axis labels
is it the correct type of graph
too much info plotted?
is it in 3D / misleading?

7. Bring some bad graphs (or data visualizations) to share with the class. You can find them on Google, or try the site: http://viz.wtf/. Bring one to share, preferably in English. Be able to explain why your example is an example of a bad graph.