 Key-ish

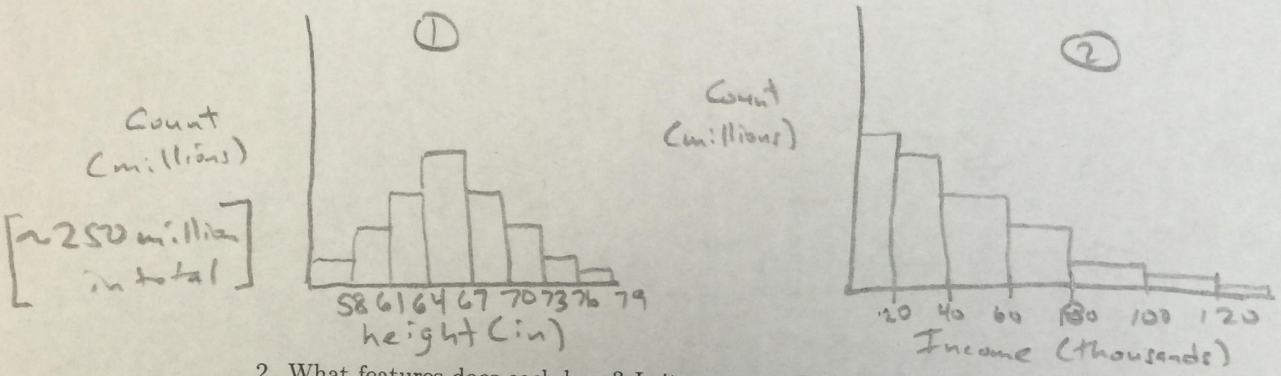
Thought Experiment Consider the following two variables:

- The `height` of all adults in the United States
- The annual `income` of all working adults in the United States

Population or sample?

Think about the distribution of each variable, and discuss the following questions with a neighbor.

1. Sketch a histogram for each distribution.



2. What features does each have? Is it symmetric? Is it normal? It is unimodal?

① symmetric, normal, unimodal

② right skewed, Not normal, unimodal

3. Label the axes on your plots. What is the range of each variable?

Height [20 inches]

Income [$140,000]

4. How would you summarize each distribution numerically? Which measures are most appropriate?

① Mean / median, sd

② Median, IQR

5. Suppose that the government issued a tax rebate in the amount of $2000 to each American taxpayer. How would the distribution of `income` change? What would happen to your measures of center and spread?

It would shift the entire dist^n to the right slightly

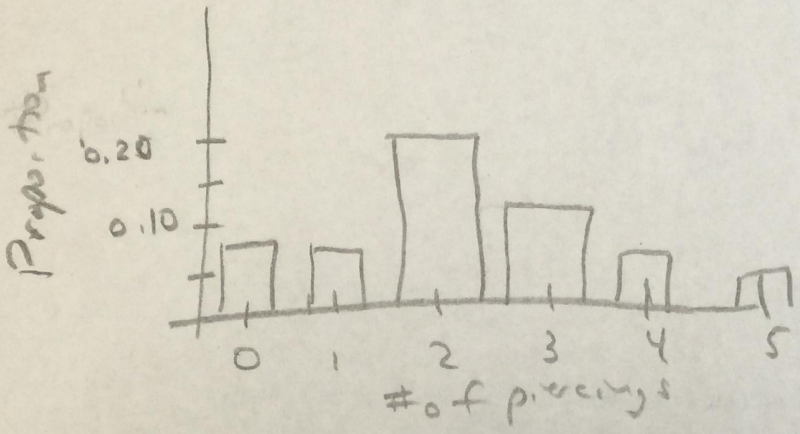
The median would increase by $2K

The IQR would not change (Same difference between Q_3 & Q_1)

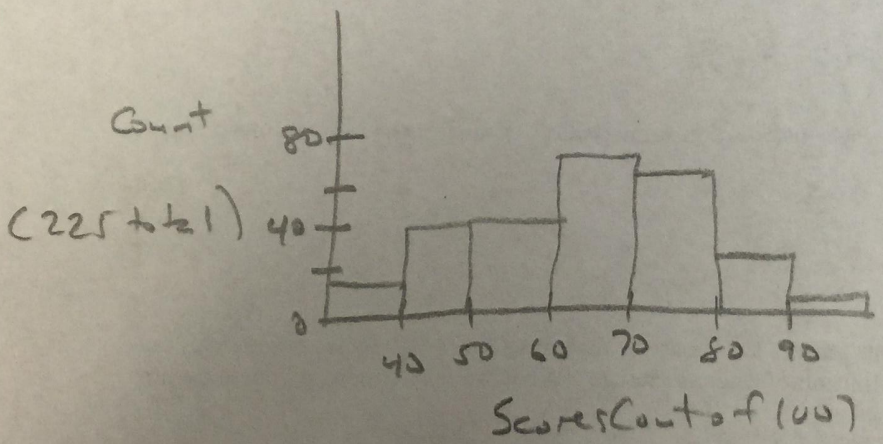
MORE ON BACK →

Using a similar approach to that on the previous page, sketch out the expected distribution for the following three variables ~~(2 on back)~~. **Make sure to also include the population of interest (of your choosing) for each of the three variables.**

- number of piercings All Reed students – Bar graph



- scores on an exam Bio 101 Fall 2015 Exam 1 – histogram
  out of 100



- IQ scores - All American adults