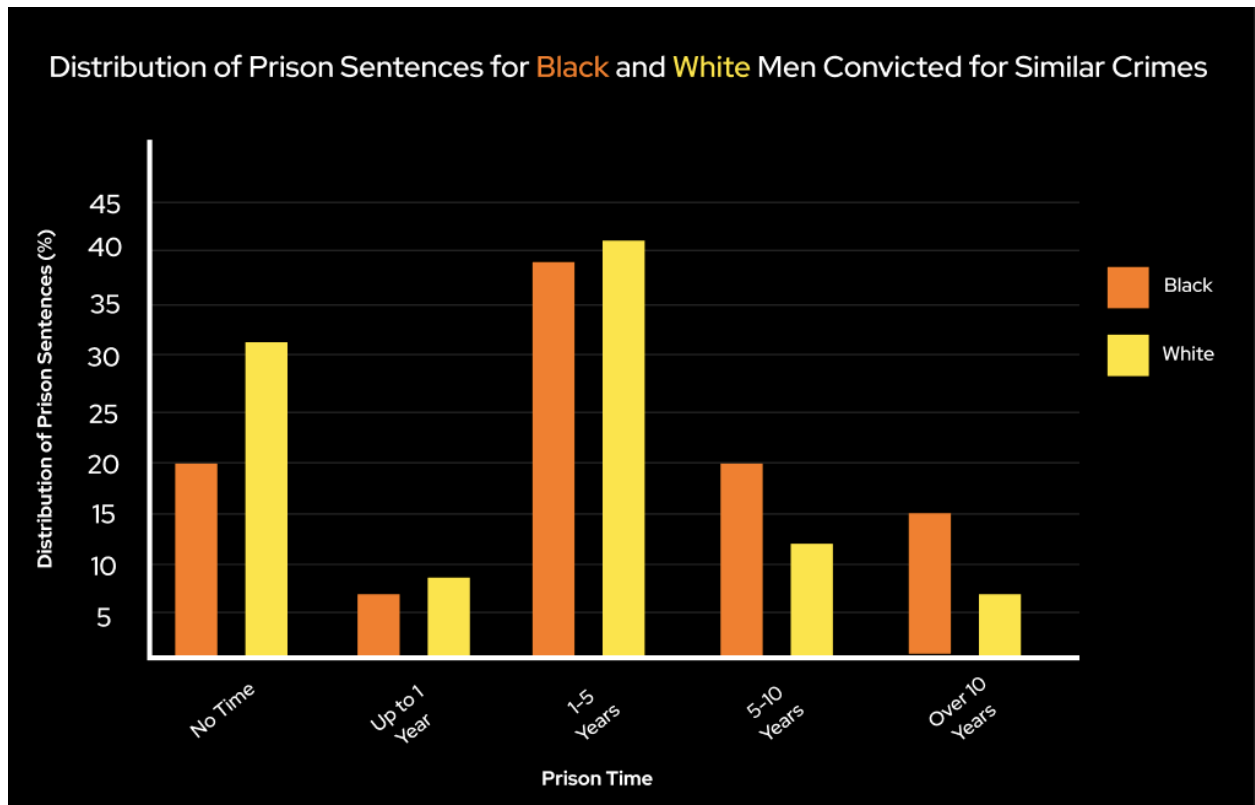
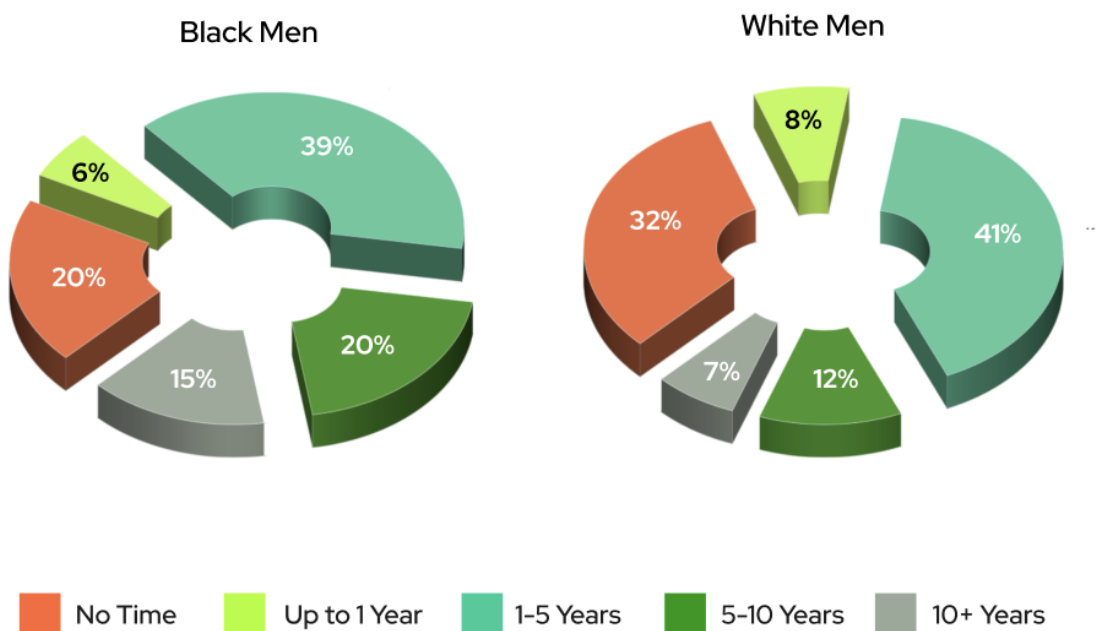


# Homework 1

## Visualizations



Distribution of Prison Sentences for **Black** and **White** Men Convicted for Similar Crimes



## Questions

- (1) Column totals represent out of the total population of black men or out of the total population of white men, what is the distribution across various prison sentences. Whereas, row totals represents out of the total of a “no time” sentence, out of a total of a sentence of “up to 1 year” and so on, how many of those were black men versus how many of those were white men. Row totals focus more on each type of prison sentence as whole whereas column totals look at each type of prison sentence as a part of the whole. The kinds of questions for the row totals would be something like, “Out of the total for prison sentences of 10 years and more, what distribution for that sentence were black men and what distribution of that were white men?”. Row totals would cause the loss of being able to compare and contrast the distribution of prison sentences for each individual race. For example, you would not be able to answer the question, “What percentage of the total population of black men had to serve no time?”. However, you would now be able to focus on each type of prison sentence as a whole if that was the goal, and compare and contrast the distribution for black men versus white men for each type of prison sentence.
- (2) Percentages are useful when comparing things that are not out of the same number. Raw counts would be useful if we were wanting to answer this question, “What percentage of black men have served no time?”, in this case, it would be more meaningful to have totals and counts in order to compute the percentage. If the total population of black men was 200,000 people for instance, then you would also need the count of the number of black men out of that number who have served no time. Since we are comparing and contrasting the distribution of black men and white men for similar crimes, it makes more sense in this context to use percentages rather than raw numbers because we are comparing two different populations which probably have different population totals.
- (3) The first visualization looks at each kind of different prison sentence, and because the bars for black men and white men are next to each other for each prison sentence, it is easier to compare. In contrast, the visualization that has pie charts, looks at each pie chart as representing the individual race. You can still compare and contrast, but it might be more inconvenient since the data is separated rather than mixed into one representation like in the first visualization. Furthermore, the first visualization is a lot more simple, it uses only two vibrant colors against neutral colors which makes the information easier to read and understand. Whereas, the second visualization has a lot of different colors, and perhaps the colors really have no meaning other than to differentiate the types of prison sentences.