Homework 6.

Problem #1

1. ~~Back to Joe Rogan, on this podcast we have Tim Pool actively pressing Twitter management (co-founder Jack Dorsey and their global lead for legal, policy, trust and safety Vijaya Gadde) on the issues of censoring and potential bias in decisions of banning certain accounts. In the chunk below, Tim specifically asks about using a randomly selected jury to judge if a tweet can be considered offensive (or just violating certain societal norms, if you will).~~

   ~~https://youtu.be/DZCBRHOg3PQ?t=6560~~

   ~~Listen to their answer, and find a sampling bias issue (there's one that's most obvious) that might arise with their approach.~~

2. ~~To give you context for the sequence of videos below: Focus groups are providing feedback on a software platform developed by a (albeit fake) Silicon Valley start-up named "Pied Piper", with a Zuckerberg look-alike in the role of this start-up's CEO.~~

   ~~https://www.youtube.com/watch?v=QYBcLMiR9b0~~

   ~~https://www.youtube.com/watch?v=Lrv8i2X3gnI~~

   ~~Proceed to point out~~

   a. ~~Two examples of sampling bias in the first video, and issues that arose from one of them.~~
   b. ~~Violation of the blinding requirement in the second video. **Note**: What's not shown in that short clip was the CEO eventually having most focus group participants understand the platform, getting excited about it, to which the emotionless focus group moderator says: "I don't know what he's so excited about. **Data got corrupted the second he walked into that room**." What did he mean by **that last phrase?**~~

   ~~**PS:** They outsourced this issue of customer education to an external company, and here is that company's "solution" to make the platform interface more user friendly :)~~

   ~~https://www.youtube.com/watch?v=Nn_LLLyMwAs~~

Problem #2

1. ~~Write a function that simulates rolls of a single die, keeps track for proportion of times we roll a 6, and plots the progression of those proportions. As arguments, it should take:~~

   - ~~the *number of rolls*, and~~
   - ~~the *seed* for random generation (for reproducibility)~~

   ~~Proceed to **demonstrate it's performance**, and~~ **comment on what you observe**, ~~for:~~

   a. ~~5 rolls~~
   b. ~~100 rolls~~
   c. ~~10000 rolls~~

2. (**+2 bonus pts, TOUGH coding question**) ~~If we roll a fair die 100 times, how likely is it to get three 6's in a row at least once? Proceed to run a 10,000 simulations that allow us to calculate that probability (in similar fashion as we checked "How likely it is to get at least 23 sixes out of a 100 rolls if a die is fair" in the class).~~

Problem #3

~~**4.35**, **4.40**, **4.46**, **4.48**~~

~~**5.2**, **5.16**, **5.23**, **5.27** (for **part (a)** NO NEED TO INCLUDE THE TREE, just provide the sample space, and calculate probabilities of each outcome)~~