csci297b Exercise 6
dplyr

For this project, use the `dplyr` library and pipes.

1. Start a new project for this series of exercises and call it `project_03_yourname`. Share it with your instructor, `gmatthews@wlu.edu`
2. Open a new R markdown file in the project called `exercise06.Rmd`
3. Load the `nycflights13` dataset
4. In a single pipeline, find all flights that meet all of the following conditions:
    - Had an arrival delay of two or more hours
    - Flew to Houston (IAH or HOU)
    - Were operated by United, American, or Delta
    - Departed in summer (July, August, and September)
    - Arrived more than two hours late, but didn't leave late
    - Were delayed by at least an hour, but made up over 30 minutes in flight
5. Sort flights to find the flights with longest departure delays. Find the flights that left earliest in the morning.
6. Sort flights to find the fastest flights. (Hint: Try including a math calculation inside of your function.)
7. Was there a flight on every day of 2013?
8. Which flights traveled the farthest distance? Which traveled the least distance?
9. Does it matter what order you used filter() and arrange() if you're using both? Why/why not? Think about the results and how much work the functions would have to do.