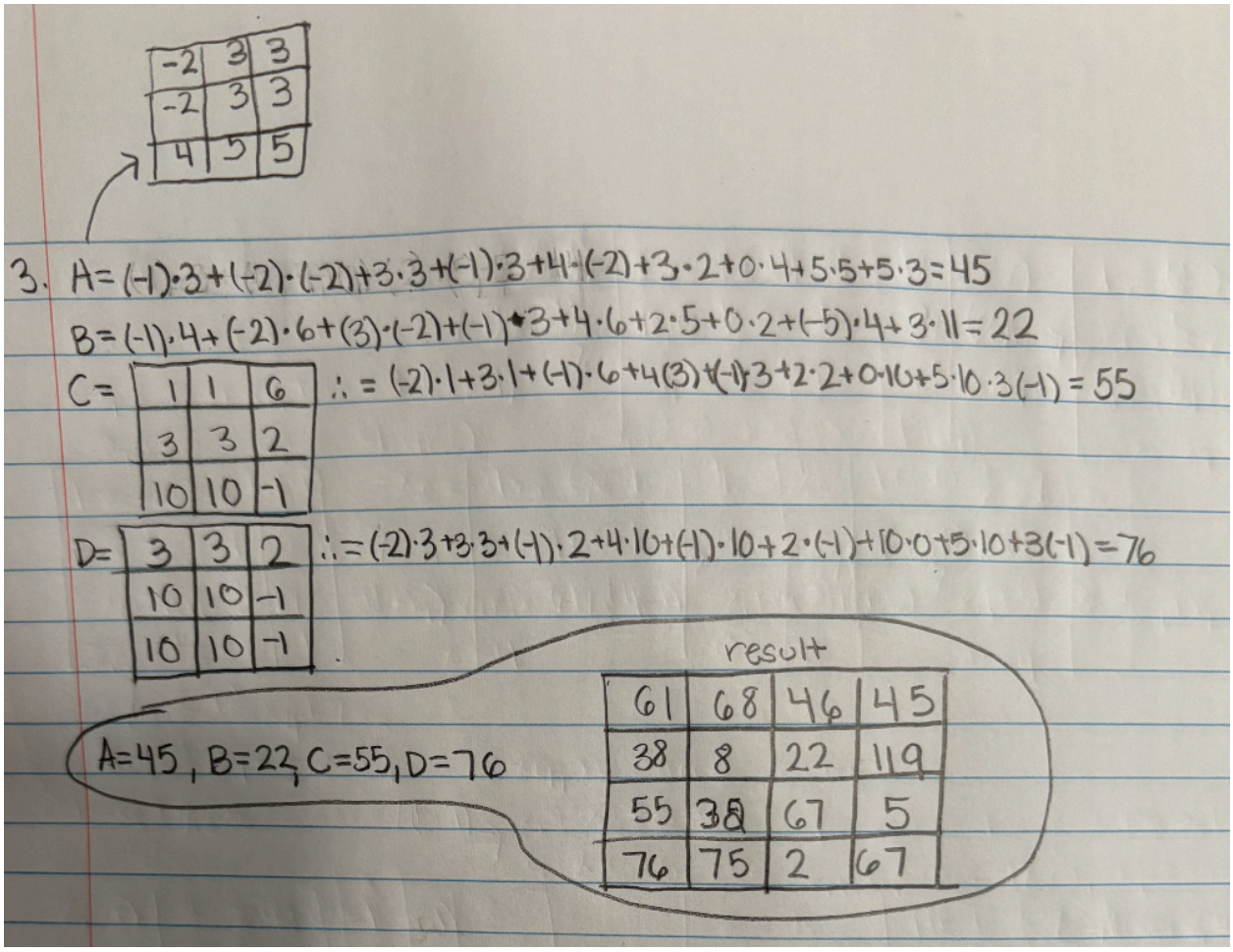
1. Comparisons and evaluations:
The three graphs all show the same data: state-wide data on arthritis, stroke, heart attacks, angina, diabetes, and kidney disease. These are all possible risk factors for heart disease, one of the leading causes of death. The goal of these visualizations was to inform legislators and other public health officials on the differences between states on these risk factors, and the number of people who experience these issues. This would make it easier to better fund certain areas of research, prevention, and medical care. The data originally is from the CDC as a part of the Behavioral Risk Factor Surveillance System (BRFSS), an annual telephone health survey. This specific data file is from https://www.kaggle.com/datasets/kamilpytlak/personal-key-indicators-of-heart-disease/data. The majority of the data types are booleans (yes/no; ex: Have had a stroke), but there are some partial booleans (ex: current smoker (daily, some days), former smoker, never smoked), strings (states), and numbered ranges (age). I formatted the data in a stacked bar chart, side-by-side bar chart, and a map with pie charts. All of the charts display each of the risk factors sum by state, and if a surveyed person possessed more than one risk factor they would be counted in both categories. The pro of the stacked bar chart is that it is the easiest to read numerically, and thus presents an accurate number to the reader. The con of a stacked bar chart is that because they are on top of each other, figuring out the totals of each category (as opposed to the ratio) is more difficult. The map is the one most associated with state data, the background color of each state is the total amount of people who had a risk factor, and the pie chart shows where those risk factors fall into. I think this graph is more visually stimulating, but there is more back and forth with the legend. The side-by-side bar chart provides the most accurate view on the pure numbers of each risk factor, but due to the high volume of data it is a lot harder to read since they are so squished in. This data may be better in multiple charts for each risk factor next to each other so they could be compared that way instead of squeezing it all on the same one. Additionally, one benefit of the stacked over the side-by-side bar graph is the removal of excess junk graph details, like the horizontal and vertical lines.

2. Visualization Critique (20/100)

The intended audience for this piece is the general public, they are not expected to have any extensive scientific background. The purpose is to show that everything, us included, is made up of atoms. In general I like the visualization, but I think that's mainly due to my biological background; I don't think it's the best visualization for its purpose (the general public). I like the color used in the work, I appreciate that they used the correct colors on the atomic bonds that match the standard conventions (red is hydrogen, etc.). I think that the piece is too long, I wouldn't exaggerate it as much as the designer did- a lot of the same point can be gotten across by making it tinier, and it could follow the rule of thirds which is more engaging to the viewer. For example, taking just the heart out of the body (so you can remove the human silhouette), make the drawing less busy, and having the vein come out horizontally so that the final atoms are on the rule of third on the right side, it would make the eye movement more natural.

3.



4. One thing that I want to learn from this course is how to make more engaging visualizations. I don't think my visualizations were bad, but comparing them to the NYT visualizations discussed in class they weren't as engaging. I understand that there were issues with those visualizations (high lie factor), but I think representing data for the scientific community is a bit more straightforward, versus the data for a common audience, like NYT has to be a bit more eye grabbing. In summary, how to transform data with a high lie factor or other issues into more accurate data and how scientists can make data visualizations more closely to graphic designers.