1. Discuss any characteristics you note about the graph you created in part (b). In your discussion, make sure to address the following:
    - What are the degrees of each vertex?
        1. Each vertex within both Roddy's and Elda's family in addition to Sandra's vertex has a degree of 3. My vertex, Lauren, maintains a degree of 1. Each edge in the graph represents a first-degree connection which constitutes a parent-child or sibling relationship, i.e. immediate family.
    - Is it a complete graph?
        1. This graph is not complete since all possible edges are not drawn between the vertices.
    - Is the graph planar?
        1. Further, this graph is not planar. We can prove this with Euler's formula where *v*, *e*, and *f* represent vertices, edges and faces, respectively: $v - e + f = 2$. Given our graph, this means $10 - 15 + 9 \neq 2$.
2. We refer to the number of steps between two people as the *degree of separation* between them.
    - What is the **largest degree of separation from you to any other person in your social network graph**?
        1. Me to person largest
            a. 4 from me to Dani
            b. 4 from me to Jacob
    - What is the **largest** degree of separation **between any two people** in your social network graph?
        1. Person to person largest
            a. Dani to Jacob is 6 degrees of separation.
3. Research about the maximum degrees of separation that has been hypothesized between any two people around the world. Discuss in your own words how graph theory concepts are involved in this research.

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We are so close, less than 4 degrees separating you and me!

Authors:

Daraghmi, Eman Yasser
Yuan, Shyan-Ming *

Six degrees of separation: the small world of medical education.

Authors:

Hautz, Wolf E
Krummrey, Gert
Exadaktylos, Aristomenis
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Articles
https://research.fb.com/blog/2016/02/three-and-a-half-degrees-of-separation/

https://www.microsoft.com/en-us/research/publication/instant-messagers-really-six-degrees-kevin-bacon-big-microsoft-study-supports-small-world-theory/

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1. In your responses to peers, discuss how much you agree with their examples and whether or not graph coloring would truly be an effective concept to implement in each case. Respond in ways that promote further conversations whenever possible such as by asking follow-up questions.

I think your first two scheduling examples are good models of proper graph coloring. I wonder if in your first example the principle can be applied to the vertices as well but perhaps that would be confusing in addition to the edges.

For your third example I find it interesting that the stained glass can function as a representation of a loosely applied graph coloring principle which I've haven't considered before but makes perfect sense in the context of design.

i find your first example really interesting. From reading through the material this week, i am led to the understanding that color graph theory is about objects that you need to keep apart in a greater group. For it to be "proper", adjacent points can't be connected. I admit, i am curious to know what the verticies would be in this example, and what it is you are trying to keep separate in the greater group of objects. Or on the other hand, perhaps i am obsessing over the "proper" color graph theory too much.

I also really enjoyed your second example. I again may be obsessing over that "proper" concept, but i imagine each team would represent a vertex. In my assumption, i am thinking that a team either has COVID, has come into contact with a team that has had COVID but is not confirmed to have it, or they don't have it and havn't come in contact. The goal might me to create three different leagues to avoid crossover?

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