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Module 3 Quiz

LATEST SUBMISSION GRADE

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1. An example of leveraging white space means that...   `1 / 1 point`

   ⦿ The bars in a bar graph should not be too wide or too narrow.

   ◯ You must leave a lot of room between the titles and data.

   ◯ You must stretch the graph to narrow the margins.

   ◯ Fill white space with a legend.

   > ✓ **Correct**
   > White space is crucial in ensuring that the audience picks up on either similarities or differences in a category.

2. True/False: You can use any combination of fonts you'd like to add pop to your visual.   `1 / 1 point`

   ⦿ False

   ◯ True

   > ✓ **Correct**
   > Stick to the basics and don't go overboard. You will lose your audience with too many font choices as well as make the visualization less effective.

3. Choose the most appropriate way to design a visualization.   `1 / 1 point`

   ◯ Add a paragraph in small font as a footnote to the visualization to explain every nuance of the data.

   ◯ Use a fun font like Comic Sans to get the reader's attention.

   ◯ Do not coordinate the color of the text with the color of the category.

   ⦿ Choose a corporate or a standard font that is consistent and easy to read.

   > ✓ **Correct**
   > Some organizations require you to use the right fonts, but if that's not the case, be conservative in your choice of typeface.

4. True/False: The Gestalt principle of proximity and the first law of geography are closely related.   `1 / 1 point`

   ◯ False

   ⦿ True

   > ✓ **Correct**
   > Tobler's first law of geography and the Gestalt principle of proximity are virtually the same thing.

5. The Gestalt principle of proximity does not mean...   `1 / 1 point`

   ⦿ If a data point is not close to other points then it is not related at all.

   ◯ Things that are close to each other are more likely to be related than those that are further apart.

   > ✓ **Correct**
   > Just because a data point isn't close doesn't mean it's not related. If fact, the lack of proximity can help gain insight into the data.

6. What would be the best guess for why there were Cholera deaths of people outside of the neighborhood of the polluted water pump?   `1 / 1 point`

   ◯ Polluted water was not the cause of Cholera. There must be some other cause.

   ◯ The researcher was wrong about determining what were polluted pumps.

   ◯ The victims died of something other than Cholera.

   ⦿ The victims who lived outside of the hot spot consumed water from the polluted pump despite living further away from the pump.

   > ✓ **Correct**
   > Do not infer without evidence that the data are "wrong" or the science is wrong or the epidemiology is wrong. The most likely explanation is that the polluted water pump was still responsible even if the victim didn't live nearby.

7. What other attributes were used in the Cholera map to ascertain which water pump was polluted?   `1 / 1 point`

   ◯ Symmetry

   ◯ Continuity

   ⦿ Color and size

○ Closure

✓ **Correct**
Strategically adding other attributes can strengthen the case you are making.

8. True/False: If you're careful and thoughtful you can re-scale complex data to help aid in accessibility of your data. **1 / 1 point**

◉ True

○ False

✓ **Correct**
The data must never be manipulated in a way that falsifies the story, but calculating indexes and other techniques can help the audience understand the underlying data.

9. True/False: It is unacceptable to use more than one type of pre-attentive attribute. **1 / 1 point**

◉ False

○ True

✓ **Correct**
You should be very systematic and strategic in choosing which pre-attentive attributes to use. Sometimes it's one, other times it will be more than one.

10. Outliers may be... **1 / 1 point**

○ Always something to be concerned about

◉ Interesting in its own way and an analyst must understand the context

○ Deleted from the dataset

○ Safely ignored after looking for them

✓ **Correct**
Outliers must be understood before you figure out how to answer questions about your data. They could be coding errors, but they could be important in and of itself.

11. In the lessons, we saw a strip plot, scatterplot, histogram, and control charts being used to investigate unusual data. Which of the following visualizations would be another good way to check for outliers? **1 / 1 point**

◉ A map for data are within a defined geographic range (such as cities in a particular state or province) and there are a couple of points that are out of the expected range.

○ A line chart which shows a very large spike in one time period.

○ A bar chart that has a very small bar that indicates that there is likely outliers.

○ A pie chart that shows a very small slice for one category means those are outliers.

✓ **Correct**
The other options are all summary visuals and tend to be poor ways to check for outliers. Those could be outliers but the only way to know for sure is to visually disaggregate the data, like in a map.

12. True/False: Because a control chart is often used in manufacturing and heavy industry, paying attention to aesthetics and pre-attentive attributes is not as important. **1 / 1 point**

◉ False

○ True

✓ **Correct**
Careful use of color and other aesthetics are about making it easy for people to identify important elements.

13. Exploratory analysis is _____? **1 / 1 point**

◉ Understanding your data well to facilitate explanatory analysis.

○ Learning about outliers.

○ Something that should be ignored if you have a clearly defined question.

○ Playing around with the data in an aimless way.

✓ **Correct**
One shouldn't do explanatory analysis without doing at least some exploratory analysis of the data.

14. Anscombe's quartet showed _____. **1 / 1 point**

◉ Visualizations are necessary and complements summary statistics.

○ Summary statistics are not helpful in any way because they mask problems with the data.

○ Visualizations are sufficient.

○ Correlation is causation.

✓ **Correct**
It seems trivial now, but both summary statistics and visualizations are crucial to understanding the data you have.