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Module 1 Quiz

Quiz, 18 questions

17/18 points (94.44%)

Congratulations! You passed!

Next Item

Question 1

Correct

1 / 1 point

1. Question 1

True/False: You have 3 data points: 29%, 33%, 31%. It is appropriate to adjust the y-axis to start at 25% because the numbers are so close to each other.

False

Correct

The fact that the numbers are so close to each other is exactly why we'd want to see them compared with the y-axis starting at 0.

True

Question 2

Correct

1 / 1 point

2. Question 2

Although most authors view pie charts as to-be-avoided at all costs, others do see them as effective. Select the one scenario where both pro- and anti-pie chart writers will agree that pie charts should not be used.

To put the audience in a positive frame of mind.

When there are 5 or more categories that are to be compared.

Correct

Too many categories to compare is best perceived in a bar graph visualization.

When Communicating part-to-whole relationship.

A pie chart with 2 slices.

Question 3

Correct

1 / 1
point

3. Question 3

According to your readings, a functionalist perspective of data visualization is _____.

When a visualization is comprehensive and can answer every question in one view.

When a visualization is exciting to look at.

When a visualization effectively represents the data so that is can be understood quickly and easily.

Correct

The author of the article, Good Visualizations Should Be Boring, defines functionalist perspective as saying, *"the purpose of visualization is to most effectively represent that data so that it can be understood by the audience both most quickly and easily."*

When a visualization uses many colors.

Question 4

Correct

1 / 1
point

4. Question 4

What's the one thing definitively wrong with this visualization:

"Then" should be yellow; "now" should be green.

Branding visualizations should be avoided at all costs.

The numbers are wrong.

The y-axis doesn't start at zero.

Correct

This one is labeled as definitively wrong, while the other options are either not definitely, problematic, or unknown.

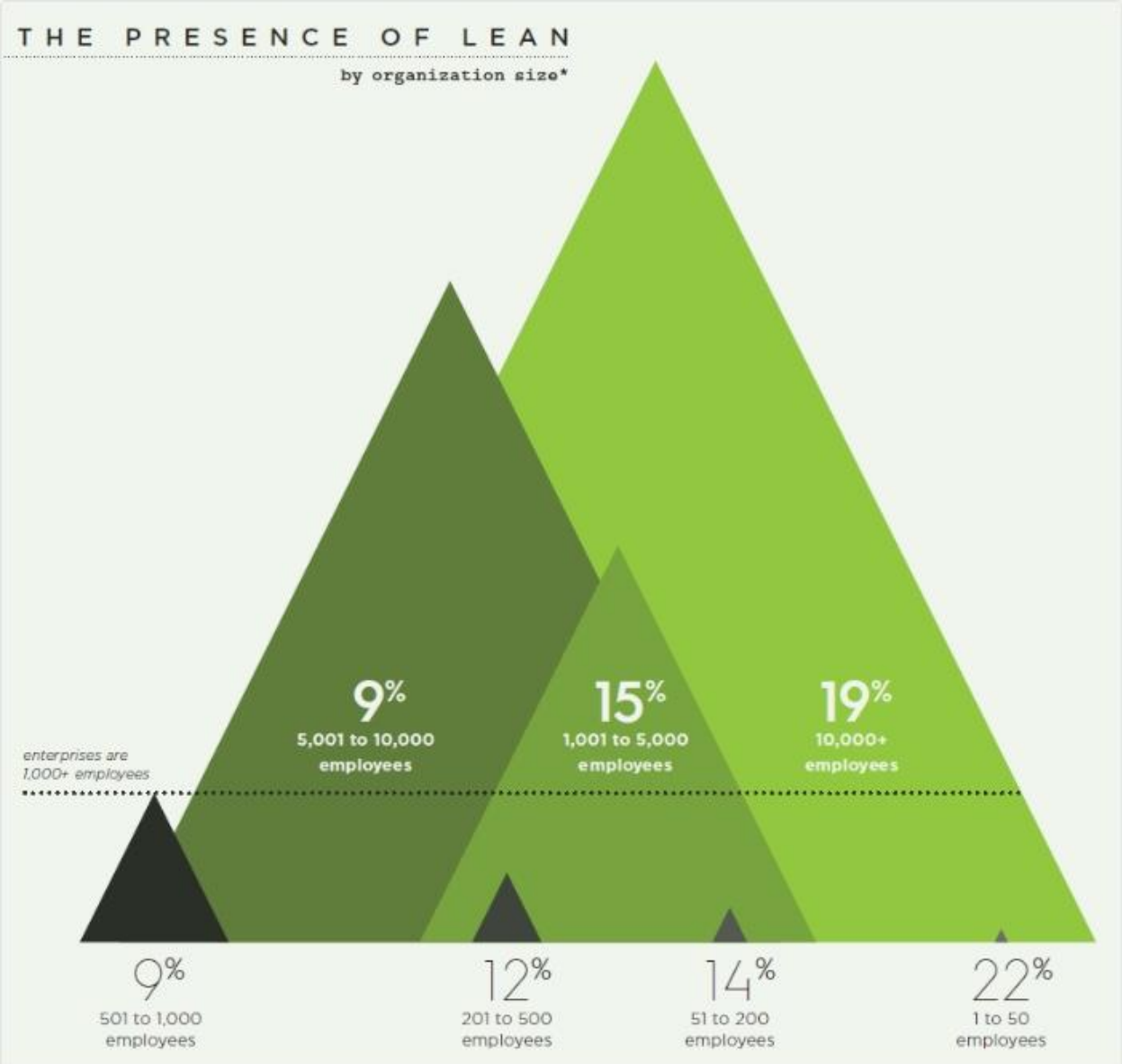
Question 5

Correct

1 / 1
point

5. Question 5

This visualization has several issues with its design. Identify the only one of the following that is not an issue with this visualization.



There is too much text.

Correct

There are so many things wrong with this visualization, but this is not one of them.

It's very difficult to interpret.

The bar heights do not match the percentages.

The reference line is not clear.

Question 6

Correct

1 / 1 point

6. Question 6

According to your readings, if you have a lot of categories in time series data, what is the best approach for your visualization from the following options:

A stream graph (a type of stacked area graph displaced around a central axis)

Stacked area graphs

Line graphs with totals above

Trellis plot

Correct

Based on the reading, Stacked Area Graphs Are Not Your Friend, using a trellis plot is the best approach, although in certain circumstances the other options, except stacked area graphs, might be okay.

Question 7

Correct

1 / 1
point

7. Question 7

True/False: It is more helpful to the reader to eliminate the axis altogether where appropriate and label individual data elements on the visualization itself.

True

Correct

Counterintuitive, but it's easier for people to read a visualization if it's labeled directly; and since it's labeled directly at least one of the axis can be eliminated.

False

Question 8

Correct

1 / 1
point

8. Question 8

A 3D chart should be used only in the following circumstances:

Whenever possible as long as you ensure that elements are well labeled.

Only when you need to plot three-dimensional data.

Correct

But for the most part, you basically never want to use a 3D chart.

Only when you need to compare values across categories.

Whenever you want to add visual elements to your visualization that pop.

Question 9

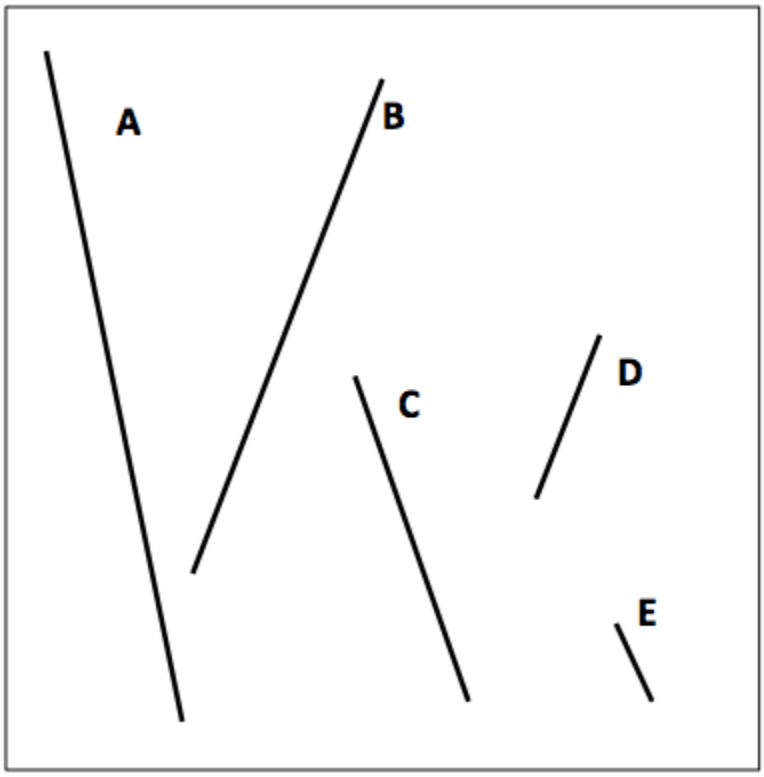
Correct

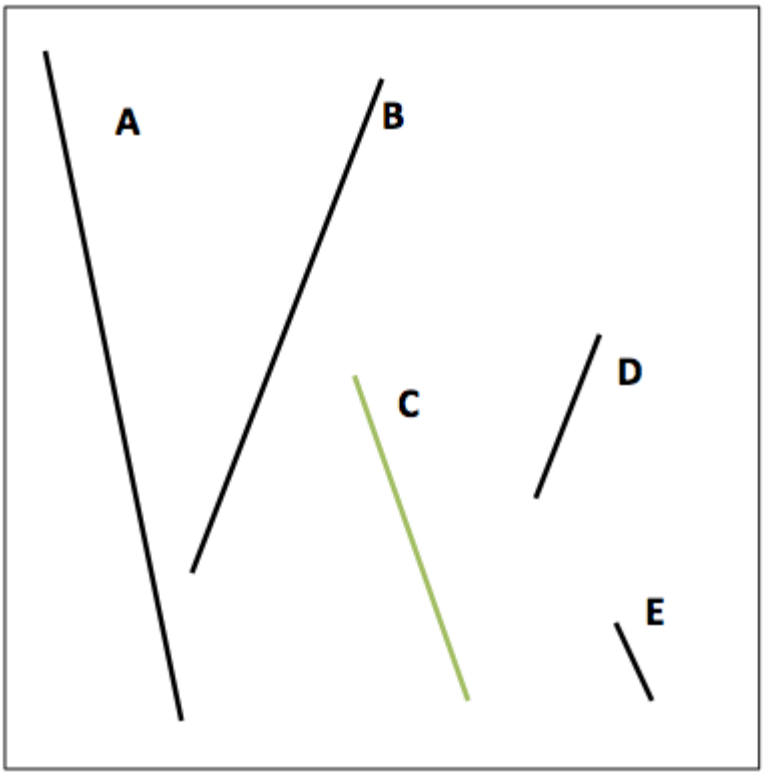
1 / 1

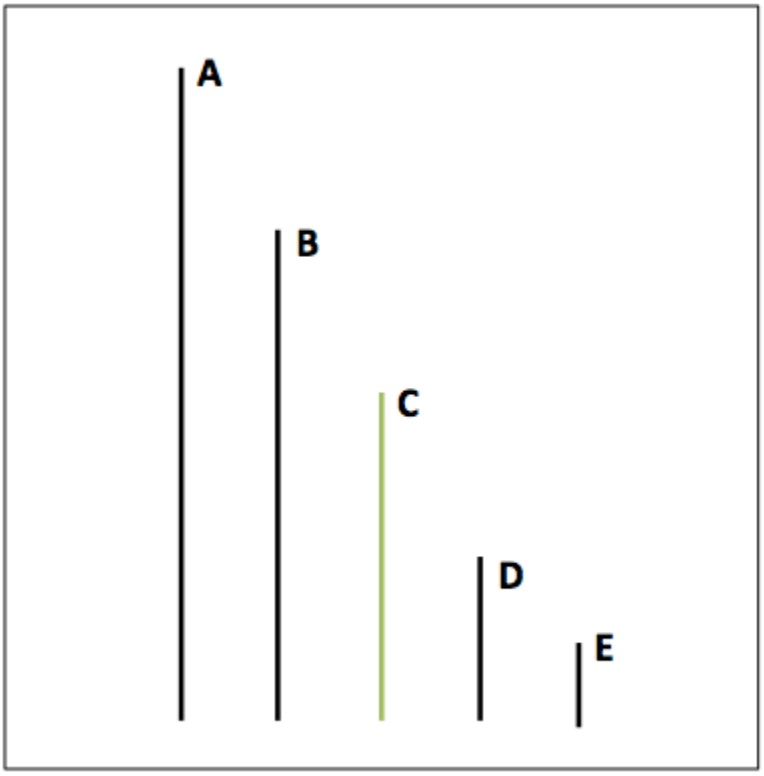
point

9. Question 9

Can you find the line with the average length in this set?




A
B
C
D
E


A
B
C
D
E

Line A

Line E

Line D

Line B

Line C

Correct

Line length is a “pop-out” effect (pre-attentive attribute) that the human brain can quickly process.

Question 10

Incorrect

0 / 1
point

10. Question 10

When doing a presentation for a large group of people, the best visualization to show differences between categories of data is one of the following:

Pie chart

This should not be selected

Please revisit the lesson ***Types of Visualizations***.

Radar chart

Cross-tabulation or table

Bar graph

Question 11

Correct

1 / 1
point

11. Question 11

A scatterplot is useful for showing _____.

Dimension on one axis and measures on the other axis.

Two different measures.

Correct

If you have two measures, your first instinct should be a scatterplot.

Data that are at different time periods.

Spatial information.

Question 12

Correct

1 / 1
point

12. Question 12

Pick the one time that you should not use a table.

Always avoid tables bigger than 2 x 2

When you are presenting to a large, live meeting.

Correct

Tables are great, but it does make it hard for people to concentrate on both your talking and understanding the table. So try to avoid it.

At a committee meeting where people can spend time focusing on the visual.

On a website which people will access on their own time.

Question 13

Correct

1 / 1
point

13. Question 13

Humans have developed perceptual and cognitive capabilities that initially tend to favor _____?

Speed

Correct

Fast visual processing and pattern detection were important to our ancestors because quick detection and reaction times could mean the difference between life and death, even if there were some false alarms. The ability to rapidly detect patterns without conscious effort is part of the reason that data visualization is so powerful, but the design also needs to support the viewers' ability to make accurate interpretations of what they are seeing.

Precision and completeness

Accuracy

Question 14

Correct

1 / 1
point

14. Question 14

True/False: Data in a visualization must never be sorted based on the importance of the category of the data.

False

Correct

It's actually the best way to sort the data.

True

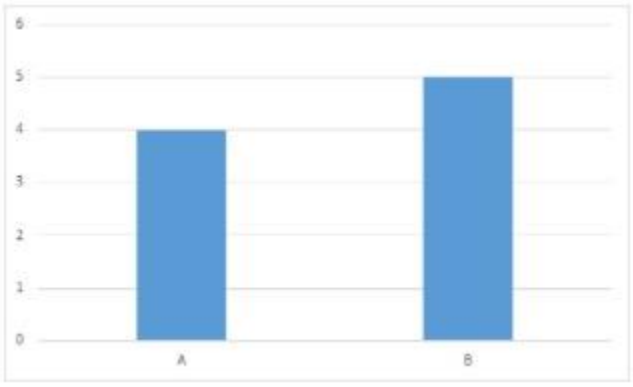
Question 15

Correct

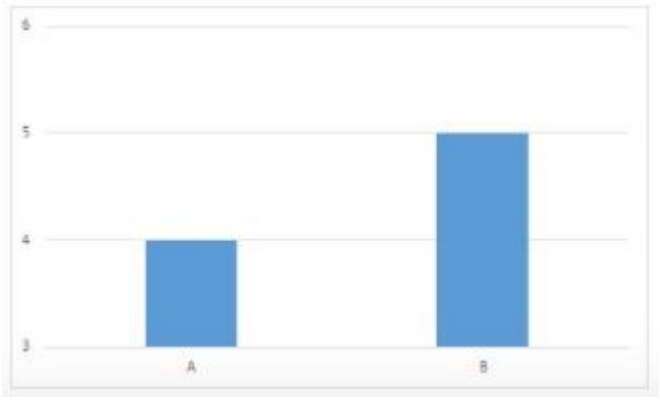
1 / 1
point

15. Question 15

Suppose you have a bar graph that has values of 4 and 5. If you start the axis at 0 and increment by 1, then the visual increase between the bars showing 5 and 4 is 25%. See example A:



What would the visual increase be between the bars representing 4 and 5 if you started the axis at 3 and incremented by one? See example B:



125%

100%

Correct

The calculation for the answer is 4 - 3 = 1 and 5 - 3 = 2, so (2 - 1)/1 = 100% or double.

12.5%

60%

Question 16

Correct

1 / 1
point

16. Question 16

Which most closely describes the process of visual encoding?

Translation

Correct

Visual encoding translates data into a “visual vocabulary and language” that the human brain is naturally good at perceiving and interpreting.

Transcending

Transposition

Question 17

Correct

1 / 1
point

17. Question 17

System 1 refers to which type of thinking and responding?

Moderate, methodical, and qualitative

Fast, intuitive, and emotional

Correct

System 1 is involved in immediate perception and can be associated with pop-out effects (sometimes called pre-attentive attributes). This is an important aspect of how people operate, but these initial perceptions and impressions need to be followed up with more deliberate thinking of System 2.

Slow, deliberate, and logical

Question 18

Correct

1 / 1 point

18. Question 18

If you had to figure out the sum of all line lengths, that would involve?

Systems 1 and 2

Correct

While you might be able to detect the line with the average length in a collection, figuring out the sum of all the line lengths, however, takes the kind of conscious and concerted effort embodied by System 2.

Only System 2

Only System 1