Feedback — Module 7 Concepts problem set

Help

You submitted this quiz on **Mon 10 Nov 2014 5:52 PM PST**. You got a score of **8.00** out of **10.00**.

Question 1

You're beginning a hard-earned vacation after the end of this course and you check into your hotel in a large city. The hotel employee takes out a map of the city and circles several important landmarks that you want to see. This map is best described as a…

Your Answer		Score	Explanation
(•) …reference map	✔	1.00	
( ) …thematic map			
( ) …thematic/reference map			
( ) …choropleth map			
Total		1.00 / 1.00	

Question Explanation

Reference maps are intended for navigation and orientation, which is the use case in this situation. See the “Introduction to Cartography” video.

Question 2

This is Part #1 of a tough question: XKCD’s map of online communities (http://xkcd.com/802/) is a spatialization that can be best described as a…

Your Answer		Score	Explanation
○ …reference map			
◉ …thematic map	✖	0.00	
○ …choropleth map			
Total		0.00 / 1.00	

Question Explanation

Because the emphasis of this map is on the location of specific entities (e.g. all blogs are on the same island), this is best classified as a reference map (of a non-geographic space). Another way to think about this is that the emphasis is NOT on communicating the distribution of a spatial attribute, which would be the case for a thematic map.

Question 3

This is Part #2: Goldsberry's explicit spatializations of basketball shooting percentage data (e.g. http://espngrantland.files.wordpress.com/2014/04/aldridgechart_1152.jpg) can best be described as…

Your Answer		Score	Explanation
…reference maps			
…cartograms			
…thematic maps	✔	1.00	
Total		1.00 / 1.00	

Question Explanation

Goldsberry is clearly emphasizing the spatial distribution of attributes (shooting percentage relative to average percentages) in these spatializations.

Question 4

When zoomed out to see the full world, Google Maps does a great job at accurately representing the sizes of countries.

Your Answer		Score	Explanation
True			
False	✔	1.00	
Google Maps doesn't do this well, but other online and mobile maps do this much better (e.g. Bing Maps – maps.bing.com).			
Total		1.00 / 1.00	

Question Explanation

Google Maps uses the Web Mercator projection, which has the major limitation of greatly exaggerating areas near the equator.

Question 5

Which is the biggest area?

Your Answer	Score	Explanation
5.0 square meters		
3.2 degrees latitude/longitude squared		

3.3 degrees latitude/longitude squared		
15.2 square meters		
There is no clear answer	✔	1.00
Total		1.00 / 1.00

Question Explanation

Because a degree of longitude maps to different linear distances depending on the latitude, the answer to this question is undefined.

Question 6

Which is the longest distance?

Your Answer	Score	Explanation
2.1m		
3 feet		
1.81 degrees latitude/longitude		

1.76 degrees latitude/longitude		
There is no clear answer	✔	1.00
Total		1.00 / 1.00

Question Explanation

Many computer scientists implicitly assume that (c) is correct in their code. Be careful not to do this. Because a degree of longitude maps to different linear distances depending on the latitude, the answer to this question is undefined.

Question 7

I can use OpenStreetMap map tiles for anything I want without any restrictions or requirements.

Your Answer		Score	Explanation
True			
False	✔	1.00	
True if I'm not making money off of the tiles, false otherwise.			
Total		1.00 / 1.00	

Question Explanation

While OpenStreetMap is far more permissive than Google, there are still rules for the use of its tiles and data (e.g. attribution). See http://www.openstreetmap.org/copyright for more information.

Question 8

The New York Times recently featured a map showing the geographic distribution of the change in the percentage of Americans that have health insurance thanks to the United States' new health care law. (http://www.nytimes.com/interactive/2014/10/29/upshot/obamacare-who-was-helped-most.html). This map can be best classified as a…

Your Answer		Score	Explanation
○ Unclassed choropleth map			
○ Cartogram			
○ Graduated symbol map			
◉ Classed choropleth map	✔	1.00	
Total		1.00 / 1.00	

Question Explanation

Because each enumeration unit in this map (counties) have a consistent color, we're looking at a choropleth map. The classes in the legend tell us we're looking at a classed choropleth map.

Question 9

If we were to make a cartogram of the spatial distribution in the New York Times Map from Question 8, which would be true? (use Google Maps if you need help with the toponyms):

Your Answer		Score	Explanation
The colors in the map would reverse			
Most of the counties in New Mexico would get much smaller			
Most of the counties in Wisconsin would get much larger			
Most of the counties in southwest Texas would get much larger	✔	1.00	
Most of the counties in Pennsylvania would get much larger			
Total		1.00 / 1.00	

Question Explanation

In cartograms, the area of enumeration units is made proportional to the value of some attribute. As such, we would expect the counties in southwest Texas, which saw enormous increases in the percent of the population with health insurance, to be much larger.

Question 10

You're looking to make a choropleth map of the percent of the population that owns a smartphone in your home country. You

turn to ColorBrewer.org to find a color scheme. Which one would be most appropriate?

Your Answer	Score	Explanation
(a) 		
(b) 		

(c) 	✖	0.00
Total		0.00 / 1.00

Question Explanation

Because the variable you're mapping is QUANTITATIVE (percent of the population that owns a smartphone), you want to emphasize changes in value and saturation rather than hue, which is done in (b) and (c).