

Multiple-Choice Answers

1. **(D)**

Just as time is essential to a historian, space and spatial perspective is the quintessential tool to geographers. You might argue that it depends on the study, but in all geographic studies, spatial patterns are the basis of analysis.

2. **(C)**

Maps are a tool geographers use to study the earth. The other choices, along with human–environment interactions, make up the five basic themes geographers use to conduct research.

3. **(C)**

Latitude and longitude together represent a place’s absolute location on the global grid. (A) would be its relative position in relation to other places; (B) would be a group of places in which Louisville shares some commonality; (D) would be a group of places sharing some form of a movement (or function) with Louisville, perhaps an airliner’s destination route; and (E) would be a map drawn from memory or recollection.

4. **(D)**

The address in (D) is the only one of its kind; therefore, it is an absolute location. (A) and (C) are lines that run around the earth with multiple places along them. (B) changes depending on what part of Denver you leave from. (E) is the name of cities in Greece, Georgia, Tennessee and many other places.

5. **(B)**

Distance from the ocean is not a part of pinpointing an absolute location on the global grid, whereas the other answer choices are all components in the determination of latitudinal–longitudinal intersection.

6. **(D)**

A city’s internal characteristics make up its site, whereas its connection to other cities is its situation. Absolute and relative location describe where a place is located on Earth, and projection describes the way in which maps depict physical features.

7. **(B)**

Formal regions are groups of places sharing internal uniformity, whether sharing a political affiliation, religious characteristic, topographic similarity, or language usage. All the answer choices include places linked through such a characteristic—not based on a moving function or diffusion route (functional region) and not based on people’s perceptions or opinions (perceptual regions). Shatter belts are countries or areas existing in the fall-out range of larger, competing countries.

8. **(A)**

Distortion occurs on all flat maps because it is impossible to take the round earth and represent it on a flat surface. An analogy is peeling an orange peel in one piece and then trying to flatten the peel; it would crack.

9. **(B)**

The Robinson projection distorts all four map properties slightly, creating the most accurate depiction overall among these types. The Mercator projection distorts size greatly, while the Peter projection maintains size but distorts shape.

10. **(C)**

Conformal projections maintain shape. Equal-area projections maintain area, azimuthal projections maintain direction, and equidistant projections maintain distance. Only a globe can maintain all four properties.

11. **(C)**

The smaller the map scale, the larger the area being represented on the map. The largest area from the list of choices is a map of the world.

12. **(B)**

An isoline map uses lines (isolines) to connect areas of equal elevation. Therefore, such a map would be useful for showing varying elevations. Dot density maps are used for showing density; cartograms show some unit of analysis in a proportional, geometric pattern that is geographically accurate; proportional-symbol maps use some symbol, such as a star or circle, to represent a pattern of some measured statistic across a map; and azimuthal maps show great-circle routes.

13. **(C)**

Proportional-symbol thematic maps use a symbol (e.g., a circle) to show some feature on a map (e.g., population). The larger the circle, the larger the population. Isoline thematic maps (A) display lines that connect points of equal value. A choropleth thematic map (B) shows a pattern of some variable, such as population density or voting patterns, by using various colors or degrees of shading. A dot density map (D) uses dots to represent the frequency of a variable in a given area. A cartogram (E) uses space to show a particular variable.

14. **(A)**

The threshold is the number of units represented by a dot. In this question, the threshold that would give most attention to rural white Americans would be the threshold that creates the most dots in rural areas. One dot per 3,000 whites would create the most dots on the map, rather than some of the higher thresholds.

15. **(A)**

The larger the area being studied, the coarser the study's level of data aggregation. The smaller the area being studied, the finer the study's level of data aggregation. In this question,

the largest spatial area listed is the level of Asian birthrates, because Asia is the largest space of the listed options.