Test Bank for Physical Geography 11th Petersen

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Chapter 02 - Representations of Earth

True / False

1. Longitude is measured in the same units as latitude.
   a. True
   b. False

ANSWER: True
REFERENCES: Maps and Location on Earth
LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.
KEYWORDS: Bloom's: Remember

2. Remote sensing is the collection of information and data about distant objects or environments.
   a. True
   b. False

ANSWER: True
REFERENCES: Remote Sensing of the Environment
LEARNING OBJECTIVES: PHYG.PETR.17.2.4 - Demonstrate knowledge of techniques that support geographic investigations, including mapping, spatial analysis, global positioning systems (GPS), geographic information systems (GIS), and remote sensing.
KEYWORDS: Bloom's: Remember

3. A representative fraction (RF) scale on a map must be expressed in terms of some unit of measurement.
   a. True
   b. False

ANSWER: False
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.
KEYWORDS: Bloom's: Understand

4. Earth is perfectly spherical.
   a. True
   b. False

ANSWER: False
REFERENCES: Maps and Location on Earth
LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.
KEYWORDS: Bloom's: Remember

5. Latitude indicates a point's location north or south of the equator.
   a. True
   b. False

ANSWER: True
REFERENCES: Maps and Location on Earth
LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.

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KEYWORDS: Bloom's: Remember

6. In the U.S. Public Lands Survey System, townships contain 36 sections.
   a. True
   b. False

ANSWER: True
REFERENCES: The Geographic Grid
LEARNING OBJECTIVES: PHYG.PETR.17.2.2 - Assess the nature and useful applications of maps and map-like presentations of the planet, or parts of Earth, citing some examples.
KEYWORDS: Bloom's: Remember

7. A map that shows both area and shape fairly well but that is not exactly correct for either, so that an "accurate looking" global map can be constructed, is called a compromise projection.
   a. True
   b. False

ANSWER: True
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.2 - Assess the nature and useful applications of maps and map-like presentations of the planet, or parts of Earth, citing some examples.
KEYWORDS: Bloom's: Remember

8. A compass needle may not point directly to the north geographic pole.
   a. True
   b. False

ANSWER: True
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.2 - Assess the nature and useful applications of maps and map-like presentations of the planet, or parts of Earth, citing some examples.
KEYWORDS: Bloom's: Understand

9. The farther apart contour lines are on an isoline map, the steeper the gradient.
   a. True
   b. False

ANSWER: False
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.2 - Assess the nature and useful applications of maps and map-like presentations of the planet, or parts of Earth, citing some examples.
KEYWORDS: Bloom's: Understand

10. One characteristic of a great circle is that it must pass through both the north and south poles.
   a. True
   b. False

ANSWER: False
REFERENCES: Maps and Location on Earth
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.

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KEYWORDS: Bloom's: Remember

11. The global positioning system (GPS) uses a network of satellites to accurately determine one's location on Earth's surface.

a. True

b. False

ANSWER: True

REFERENCES: The Geographic Grid

LEARNING OBJECTIVES: PHYG.PETR.17.2.4 - Demonstrate knowledge of techniques that support geographic investigations, including mapping, spatial analysis, global positioning systems (GPS), geographic information systems (GIS), and remote sensing.

KEYWORDS: Bloom's: Remember

12. On a map with a scale of 1:25,000, 1 inch on the map represents 25,000 feet on Earth.

a. True

b. False

ANSWER: False

REFERENCES: Maps and Map Projections

LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.

KEYWORDS: Bloom's: Understand

13. Parallels run north and south and intersect meridians at 90° angles.

a. True

b. False

ANSWER: False

REFERENCES: The Geographic Grid

LEARNING OBJECTIVES: PHYG.PETR.17.2.2 - Assess the nature and useful applications of maps and map-like presentations of the planet, or parts of Earth, citing some examples.

KEYWORDS: Bloom's: Remember

14. The Mercator projection greatly exaggerates the size of areas in the high latitude regions.

a. True

b. False

ANSWER: True

REFERENCES: Maps and Map Projections

LEARNING OBJECTIVES: PHYG.PETR.17.2.2 - Assess the nature and useful applications of maps and map-like presentations of the planet, or parts of Earth, citing some examples.

KEYWORDS: Bloom's: Remember

15. The great circle of the equator has a greater circumference than a great circle running through the poles.

a. True

b. False

ANSWER: True

REFERENCES: Maps and Location on Earth

LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can

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be represented on a variety of visual media—maps, aerial photographs, and other imagery.

KEYWORDS: Bloom's: Understand

Multiple Choice

16. A map of the Arctic Ocean and the surrounding polar region is likely to utilize a ____ projection.
    a. cylindrical
    b. hexagonal
    c. planar
    d. conical
    e. Cubic

ANSWER: c

REFERENCES: Maps and Map Projections

LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.

KEYWORDS: Bloom's: Remember

17. Lines of longitude are numbered from 0° to ____ (E and W).
    a. 15°
    b. 360°
    c. 270°
    d. 180°
    e. 90°

ANSWER: d

REFERENCES: Maps and Location on Earth

LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.

KEYWORDS: Bloom's: Remember

18. When creating a map, it is impossible to ____.
    a. include the North or South Poles
    b. accurately maintain all a spherical planet's geometric properties
    c. keep lines of latitude parallel
    d. scale the map accurately
    e. represent topography

ANSWER: b

REFERENCES: Maps and Map Projections

LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.

KEYWORDS: Bloom's: Understand

19. For a digital elevation model, ____ is the practice of stretching the vertical scale to enhance the relief of an area.
    a. scalar magnification
    b. vertical exaggeration
    c. remote sensing

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d. scaling
e. contouring

ANSWER: b
REFERENCES: Modern Mapmaking
LEARNING OBJECTIVES: PHYG.PETR.17.2.5 - Evaluate the advantages and limitations of different kinds of representations of Earth and its areas.
KEYWORDS: Bloom's: Remember

20. The computer-based technology called ____ represents a "marriage" between computer cartography and database management.
a. spectral analysis
b. multi-spectral scanning
c. spatial analysis
d. geographic information system (GIS)
e. conformal projection

ANSWER: d
REFERENCES: Modern Mapmaking
LEARNING OBJECTIVES: PHYG.PETR.17.2.4 - Demonstrate knowledge of techniques that support geographic investigations, including mapping, spatial analysis, global positioning systems (GPS), geographic information systems (GIS), and remote sensing.
KEYWORDS: Bloom's: Understand

21. A map capable of showing true directions as straight lines running through a central point is called a(n) ____.
a. Mercator map
b. equal-area map
c. planar map
d. focal map
e. azimuthal map

ANSWER: e
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.
KEYWORDS: Bloom's: Remember

22. Which of these is an example of an active remote sensing system?
a. video from unmanned aerial vehicles
b. aerial photography
c. near-infrared (NIR) imaging
d. thermal infrared satellite images
e. radar

ANSWER: e
REFERENCES: Remote Sensing of the Environment
LEARNING OBJECTIVES: PHYG.PETR.17.2.4 - Demonstrate knowledge of techniques that support geographic investigations, including mapping, spatial analysis, global positioning systems (GPS), geographic information systems (GIS), and remote sensing.

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KEYWORDS: Bloom's: Understand

23. Cartography is the science and profession of ____.
    a. data collection
    b. surveying
    c. navigation
    d. satellite sensor design
    e. mapmaking

ANSWER: e
REFERENCES: Maps and Location on Earth
LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.
KEYWORDS: Bloom's: Remember

24. A map of soil types is an example of a(n) ____ map.
    a. oblate
    b. gnomonic
    c. conformal
    d. thematic
    e. verbal

ANSWER: d
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.
KEYWORDS: Bloom's: Understand

25. The circle of illumination divides Earth into two hemispheres known as ____.
    a. longitude and latitude
    b. east and west
    c. summer and winter
    d. day and night
    e. north and south

ANSWER: d
REFERENCES: Maps and Location on Earth
LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.
KEYWORDS: Bloom's: Remember

26. The Mercator map projection is actually a(n) ____ projection that has been mathematically adjusted.
    a. conical
    b. interrupted
    c. cylindrical
    d. equal-area
    e. planar

ANSWER: c

Access Complete Test Bank for Physical Geography 11th Petersen

REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.
KEYWORDS: Bloom's: Remember

27. A map scale of 1:100,000 is an example of a(n) ____.
    a. graphic scale
    b. bar scale
    c. thematic scale
    d. representative fraction scale
    e. verbal scale

ANSWER: d
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.
KEYWORDS: Bloom's: Remember

28. Latitude angles ____ as one moves away from the equator.
    a. decrease
    b. increase and then decrease
    c. increase
    d. are constant
    e. change with longitude

ANSWER: c
REFERENCES: Maps and Location on Earth
LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.
KEYWORDS: Bloom's: Remember

29. Any circle on Earth's surface that does not divide the planet into equal halves is called a(n) ____.
    a. hemisphere
    b. great circle
    c. quadrant
    d. small circle
    e. semicircle

ANSWER: d
REFERENCES: Maps and Location on Earth
LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.
KEYWORDS: Bloom's: Remember

30. 10°30'N latitude can also be described in decimal degrees as ____.
    a. -10.3
    b. -10.5
    c. 10.5

Access Complete Test Bank for Physical Geography 11th Petersen

d. 10.3

e. -80.7

ANSWER: c

REFERENCES: Maps and Location on Earth

LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.

KEYWORDS: Bloom's: Understand

31. Which of these is an example of a verbal scale?

a. a north arrow

b. 1:10, 000

c. contour interval = 20 ft

d. 1 inch to 10 miles

e. 

ANSWER: d

REFERENCES: Maps and Map Projections

LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.

KEYWORDS: Bloom's: Remember

32. On a standard near-infrared (false-color) image, the color red represents ____.

a. roads

b. areas of barren land

c. areas that are hot

d. growing vegetation

e. open water

ANSWER: d

REFERENCES: Remote Sensing of the Environment

LEARNING OBJECTIVES: PHYG.PETR.17.2.4 - Demonstrate knowledge of techniques that support geographic investigations, including mapping, spatial analysis, global positioning systems (GPS), geographic information systems (GIS), and remote sensing.

KEYWORDS: Bloom's: Remember

33. In the U.S. Public Lands Survey System, one section covers ____.

a. 1 square mile

b. 36 square miles

c. 1 acre

d. 6 acres

e. 6 square miles

ANSWER: a

REFERENCES: The Geographic Grid

LEARNING OBJECTIVES: PHYG.PETR.17.2.2 - Assess the nature and useful applications of maps and map-like presentations of the planet, or parts of Earth, citing some examples.

KEYWORDS: Bloom's: Remember

Access Complete Test Bank for Physical Geography 11th Petersen

34. Lines on a map that connect points with the same numerical value are called ____.
    a. rhumb lines
    b. great circles
    c. isolines
    d. small circles
    e. base lines

ANSWER: c
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.
KEYWORDS: Bloom's: Understand

35. The term "parallels" refers to ____.
    a. rhumb lines
    b. great circle routes
    c. lines of latitude
    d. lines of longitude
    e. lines of meridian

ANSWER: c
REFERENCES: The Geographic Grid
LEARNING OBJECTIVES: PHYG.PETR.17.2.2 - Assess the nature and useful applications of maps and map-like presentations of the planet, or parts of Earth, citing some examples.
KEYWORDS: Bloom's: Remember

36. Mercator maps show the greatest amount of distortion in the ____.
    a. Eastern Hemisphere
    b. Atlantic Ocean
    c. middle latitudes
    d. equatorial regions
    e. polar regions

ANSWER: e
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.
KEYWORDS: Bloom's: Remember

37. Which remote sensing system is used to measure land surface elevations?
    a. thermal infrared
    b. lidar
    c. aerial photographs
    d. near-infrared
    e. ultraviolet (UV)

ANSWER: b
REFERENCES: Remote Sensing of the Environment

Access Complete Test Bank for Physical Geography 11th Petersen

LEARNING OBJECTIVES: PHYG.PETR.17.2.4 - Demonstrate knowledge of techniques that support geographic investigations, including mapping, spatial analysis, global positioning systems (GPS), geographic information systems (GIS), and remote sensing.
KEYWORDS: Bloom's: Remember

38. A geographic information system (GIS) can manage multiple datasets for an area by keeping them in separate ____.
    a. gradients
    b. projections
    c. layers
    d. legends
    e. visualization models
ANSWER: c
REFERENCES: Modern Mapmaking
LEARNING OBJECTIVES: PHYG.PETR.17.2.4 - Demonstrate knowledge of techniques that support geographic investigations, including mapping, spatial analysis, global positioning systems (GPS), geographic information systems (GIS), and remote sensing.
KEYWORDS: Bloom's: Remember

39. Which instrument could you use to determine your current latitude?
    a. compass
    b. chronometer
    c. pixel
    d. sextant
    e. sonar
ANSWER: d
REFERENCES: Maps and Location on Earth
LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.
KEYWORDS: Bloom's: Remember

40. Globally, how many time zones are there?
    a. 4
    b. 24
    c. 10
    d. 40
    e. 180
ANSWER: b
REFERENCES: The Geographic Grid
LEARNING OBJECTIVES: PHYG.PETR.17.2.2 - Assess the nature and useful applications of maps and map-like presentations of the planet, or parts of Earth, citing some examples.
KEYWORDS: Bloom's: Remember

Completion

41. The _____ is the arbitrary starting point for longitude measurement. (two words)
ANSWER: prime meridian

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REFERENCES: Maps and Location on Earth
LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.
KEYWORDS: Bloom's: Remember

42. If one topographic contour represents an elevation of 60 feet, and the next contour represents 80 feet, then the _____ is 20 feet. (two words)
ANSWER: contour interval
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.
KEYWORDS: Bloom's: Understand

43. The relationship between distances on the ground and the same distance as it appears on the map is called _____.
ANSWER: scale
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.
KEYWORDS: Bloom's: Remember

44. A key that explains symbols used on a map is called a(n) _____.
ANSWER: legend
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.1 - Explain the ways that Earth and its regions, places, and locations can be represented on a variety of visual media—maps, aerial photographs, and other imagery.
KEYWORDS: Bloom's: Remember

45. Maps that maintain true shape of areas are said to be _____.
ANSWER: conformal
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.
KEYWORDS: Bloom's: Remember

46. The angular difference between true north and magnetic north is called _____. (two words)
ANSWER: magnetic declination
REFERENCES: Maps and Map Projections
LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.
KEYWORDS: Bloom's: Remember

47. An active remote sensing system that uses reflections from emitted sound waves to probe ocean depths is called ____.
ANSWER: sonar
REFERENCES: Remote Sensing of the Environment
LEARNING OBJECTIVES: PHYG.PETR.17.2.4 - Demonstrate knowledge of techniques that support geographic investigations, including mapping, spatial analysis, global positioning systems (GPS),

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geographic information systems (GIS), and remote sensing.

KEYWORDS: Bloom's: Remember

48. The _____ system divides compass directions into four quadrant of 90° (N, E, S, W), each numbered by directions in degrees away from either north or south.

ANSWER: bearing

REFERENCES: Maps and Map Projections

LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.

KEYWORDS: Bloom's: Remember

49. Phenomena that are each located at a particular place, but do not exist everywhere, can be represented by _____ data.

ANSWER: discrete

REFERENCES: Maps and Map Projections

LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.

KEYWORDS: Bloom's: Remember

50. An aerial photograph taken at an acute angle to Earth's surface is known as a(n) _____ image.

ANSWER: oblique

REFERENCES: Remote Sensing of the Environment

LEARNING OBJECTIVES: PHYG.PETR.17.2.4 - Demonstrate knowledge of techniques that support geographic investigations, including mapping, spatial analysis, global positioning systems (GPS), geographic information systems (GIS), and remote sensing.

KEYWORDS: Bloom's: Understand

51. The perspective of maps that present a landscape if viewed from directly overhead, looking straight down, is described as _____ view.

ANSWER: plan, planimetric

REFERENCES: Maps and Map Projections

LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.

KEYWORDS: Bloom's: Remember

52. The size of the area imaged by each pixel of a satellite image is called the spatial ____.

ANSWER: resolution

REFERENCES: Remote Sensing of the Environment

LEARNING OBJECTIVES: PHYG.PETR.17.2.4 - Demonstrate knowledge of techniques that support geographic investigations, including mapping, spatial analysis, global positioning systems (GPS), geographic information systems (GIS), and remote sensing.

KEYWORDS: Bloom's: Remember

53. Weather _____ systems produce map-like images of precipitation.

ANSWER: radar

REFERENCES: Remote Sensing of the Environment

LEARNING OBJECTIVES: PHYG.PETR.17.2.6 - Understand how the proper techniques, images, and maps can be used

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to best advantage in solving geographic problems.

KEYWORDS: Bloom's: Remember

54. Satellites in a(n) _____ orbit stay located over the same spot above Earth.

ANSWER: geostationary, geosynchronous

REFERENCES: Remote Sensing of the Environment

LEARNING OBJECTIVES: PHYG.PETR.17.2.5 - Evaluate the advantages and limitations of different kinds of representations of Earth and its areas.

KEYWORDS: Bloom's: Remember

55. Using and comparing more than one kind of image of the same place (for example, near-infrared and normal color) is called ____ remote sensing.

ANSWER: multispectral

REFERENCES: Remote Sensing of the Environment

LEARNING OBJECTIVES: PHYG.PETR.17.2.5 - Evaluate the advantages and limitations of different kinds of representations of Earth and its areas.

KEYWORDS: Bloom's: Remember

Essay

56. Why is it so difficult to produce maps of the globe that accurately maintain all geometric properties?

ANSWER: It is impossible to present a spherical planet on a flat (two-dimensional) surface and accurately maintain all of its geometric properties.

REFERENCES: Maps and Map Projections

LEARNING OBJECTIVES: PHYG.PETR.17.2.3 - Find and describe the locations of places using coordinate systems, use topographic maps to find elevations, and understand the three types of map scales.

KEYWORDS: Bloom's: Understand

57. Explain conformal, equal-area, and compromise world maps in terms of their advantages and drawbacks. What are some of the applications for each kind?

ANSWER: Conformal maps maintain the correct shapes of areas, but do not preserve size. Equal-area maps maintain size, but distort shapes. Compromise projections are neither conformal nor equal-area, but can produce "accurate looking" maps. Equal-area maps are useful for showing the distributions of features such as earthquakes or hurricanes. Conformal maps represent the globe in an easily recognizable form. Compromise projections are a happy medium that minimizes misleading inaccuracies.

REFERENCES: Maps and Map Projections

LEARNING OBJECTIVES: PHYG.PETR.17.2.2 - Assess the nature and useful applications of maps and map-like presentations of the planet, or parts of Earth, citing some examples.

KEYWORDS: Bloom's: Understand

58. What piece of information do you need to accurately use a compass in a new area, and why?

ANSWER: You need to know the magnetic declination, the angular difference between magnetic north and true geographic north for a location. Having this is necessary because the magnetic north pole and the geographic North Pole are not in exactly the same place.

REFERENCES: Maps and Map Projections

LEARNING OBJECTIVES: PHYG.PETR.17.2.5 - Evaluate the advantages and limitations of different kinds of representations of Earth and its areas.

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KEYWORDS: Bloom's: Understand

59. How could you use a geographic information system (GIS) to map out homes at risk from coastal flooding in an area? What sorts of map layers might you need?

ANSWER: Modern Mapmaking

REFERENCES: PHYG.PETR.17.2.6

LEARNING OBJECTIVES: PHYG.PETR.17.2.6 - Understand how the proper techniques, images, and maps can be used to best advantage in solving geographic problems.

KEYWORDS: Bloom's: Apply

60. Explain the difference between active and passive remote sensing systems, giving an example of each.

ANSWER: Passive systems make use of available energy where an image is taken. Active systems emit a form of energy and record its reflected return from a surface. Examples of passive systems include near-infrared and thermal infrared imaging. Examples of active systems include radar, lidar, and sonar.

REFERENCES: Remote Sensing of the Environment

LEARNING OBJECTIVES: PHYG.PETR.17.2.6 - Understand how the proper techniques, images, and maps can be used to best advantage in solving geographic problems.

KEYWORDS: Bloom's: Understand

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