

# Advanced Cartographic Principles

Geography · Answer Key · 25 Questions

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**1. Which map projection is characterized by the preservation of true compass bearings between points, making it ideal for marine navigation?**

**A) Mercator Projection**

B) Gall-Peters Projection

C) Mollweide Projection

D) Robinson Projection

**2. On a map with a representative fraction of 1:50,000, how many kilometres does 1 centimetre on the map represent in the real world?**

A) 0.05 km

**B) 0.5 km**

C) 5 km

D) 50 km

**3. Which line of latitude is defined as approximately 23.5 degrees North of the Equator?**

A) Tropic of Capricorn

B) Arctic Circle

**C) Tropic of Cancer**

D) Prime Meridian

**4. What term describes the angular difference between true north and magnetic north at a specific location on Earth?**

A) Azimuth

**B) Declination**

C) Bearing

D) Latitude

**5. What is the primary visual technique used on a choropleth map to represent statistical data?**

A) Isolines

**B) Shaded regions based on data values**

C) Dot density symbols

D) Flow arrows

**6. Which grid coordinate system divides the Earth into 60 zones, each 6 degrees of longitude wide, and is commonly used for military and surveying purposes?**

**A) Universal Transverse Mercator (UTM)**

- B) Mercator Grid
- C) Lambert Conformal Conic
- D) WGS84

**7. An isoline on a map connecting points of equal atmospheric pressure is known as what?**

A) Isohyet

**B) Isobar**

- C) Isotherm
- D) Isohaline

**8. Which map projection is classified as an 'equal-area' projection, famously known for representing the relative size of landmasses more accurately than the Mercator?**

**A) Gall-Peters**

- B) Robinson
- C) Mercator
- D) Miller Cylindrical

**9. In cartography, what is the 'legend' or 'key' primarily responsible for?**

A) Defining the map projection

**B) Explaining symbols, colors, and patterns**

- C) Identifying the cartographer
- D) Calculating the scale factor

**10. Which type of map is specifically designed to show the physical relief of an area using contour lines?**

A) Thematic map

**B) Topographic map**

- C) Cadastral map
- D) Mental map

**11. What is the name of the vertical datum used as a reference point for measuring elevation above sea level?**

**A) Mean Sea Level**

- B) Geoid height
- C) Tidal prism
- D) Equatorial bulge

**12. When reading a map, what does a 'large-scale' map typically show?**

- A) A large area in low detail
- B) A small area in great detail**
- C) The entire world
- D) Only political boundaries

**13. Which instrument was historically used by cartographers to measure the altitude of celestial bodies to determine latitude?**

- A) Sextant**
- B) Compass
- C) Barometer
- D) Anemometer

**14. Which of the following is an example of a qualitative thematic map?**

- A) A map showing population density
- B) A map showing climate zones by color**
- C) A map showing crop yield per hectare
- D) A map showing precipitation levels

**15. What is the technical term for the art, science, and technology of making maps?**

- A) Geography
- B) Geodesy
- C) Cartography**
- D) Topography

**16. On a map, what do 'hachures' represent?**

- A) Political borders
- B) Relative slope steepness**
- C) Water depth
- D) Road classifications

**17. Which coordinate represents the angular distance measured north or south of the Equator?**

- A) Longitude
- B) Latitude**
- C) Prime Meridian
- D) Bearing

**18. What is the reference line for measuring longitude, passing through Greenwich, England?**

- A) The Equator
- B) The International Date Line
- C) The Prime Meridian**
- D) The Tropic of Cancer

**19. Which type of distortion is inherent in all flat maps of the Earth's surface?**

- A) Distance, area, shape, or direction**
- B) Only color accuracy
- C) Only elevation
- D) Only scale

**20. A 'planimetric' map is distinct because it lacks which feature?**

- A) Political boundaries
- B) Road networks
- C) Vertical relief data**
- D) Latitude lines

**21. What does the 'scale' of a map represent?**

- A) The ratio of map distance to ground distance**
- B) The total surface area of the map
- C) The degree of curvature of the Earth
- D) The date the map was created

**22. Which map feature uses a series of closely spaced lines to indicate steep slopes?**

- A) Contour lines**
- B) Isotherms
- C) Hachures
- D) Meridians

**23. What is the maximum value in degrees for longitude?**

- A) 90 degrees
- B) 180 degrees**
- C) 270 degrees
- D) 360 degrees

**24. In a GPS context, how many satellites are typically required to provide a reliable 3D position (latitude, longitude, and altitude)?**

- A) Two
- B) Three
- C) Four**
- D) Seven

**25. Which mapping term refers to a map that shows ownership boundaries and property lines?**

- A) Topographic map
- B) Cadastral map**
- C) Thematic map
- D) Hydrographic map