

READING PASSAGE

You should spend about 20 minutes on **Questions 1–13**, which are based on the reading passage below.

Cartography



The history and study of cartography or map making shows how maps have influenced human affairs in the past. It necessarily involves not only the technical process used to make maps, but also observes the motives for their making and their role in forming society's views of space and place.

All humans possess a complex spatial knowledge of their environment. This 'cognitive mapping' is created through direct experience and by communication with others. However, the more formal activity of map making usually arises from the social needs of complex, extensive, and often highly bureaucratic societies. For societies in which humans live and communicate within small groups, there is little need to make maps of the terrestrial environment. Thus, it is probable that the function of a few petroglyphs that can broadly be identified as maps from the Upper Palaeolithic period, c. 30,000 BC, was probably magical and cosmographical (perhaps associated with agricultural fertility rites), and most of the images are in abstract as if viewed from above. Important Neolithic examples include a representation of the Anatolian town Çatal Hüyük (in present-day Turkey) from about 6200 BC, and a series of complex topographical images from the foothills of the Italian Alps in Valcamonica dating from around 1500 BC.

The very terms 'map' and 'cartography', with their strong Western overtones, are unsatisfactory for small indigenous local cultures, even though iconic representations of territory that approach the European functions of maps have existed. The form of these spatial expressions may be in an oral or kinaesthetic ritual performance rather than an inscription industrial societies normally regard as a map.

There are several characteristics that indigenous maps share cross-culturally. One is to serve as a record of a creation story or genealogical lineage of a people, as in many Ojibwa migration charts. Here, where migrations, astronomical events, battles, and other events are recorded for posterity, the representation of time and space is conflated in the form of the map, so that events separated by many centuries may appear side by side. In Australia, reconstructions of the legendary tracks of ancestors, the Dreamings, are recorded in bark paintings and other media of Aboriginal art. Sacred and secular uses are often merged, so that a representation of the cardinal directions in the cosmos may be embodied in the plan of a village or house, as in the Dogon peoples of the Sahara. There are also didactic or mnemonic uses of maps in local indigenous cultures. For example, the stick charts of the people of the Marshall Islands (the only group that made these forms of map) are a training aid for navigators for understanding the location and pattern of ocean swells. In Africa, memory boards are used in initiation rites establishing lineage of kingships and recalling the location of famous events. Among the Apache, notched sticks were used to remember landmarks for expeditions.

Surviving artefacts from the civilizations of Mesopotamia show a profound knowledge of astronomy for astrological purposes, as well as a practical knowledge of geometry and surveying in field surveys for taxation and irrigation purposes. These are mainly in the form of hundreds of clay tablets recording cadastral (landownership) information, mostly dating from the 1st millennium BC. Fewer map artefacts survive from ancient Egypt, but there is graphic evidence in wall

paintings, inscriptions, and manuscripts of surveying instruments used to survey buildings and re-establish field markers after the annual flooding of the Nile had swept them away. The A'h-mose or Rhind mathematical papyrus in the British Museum (dating between 1750 and 1580 BC) is an important source of such information.

Different types of maps were made in the European Middle Ages. The first of these are manuscript sea charts, mainly of the Mediterranean (the so-called portolan charts), originating from the 13th century. From the earliest



known chart, the Carte Pisane (c 1275), to charts of the 17th century, the method of construction appears to have been the same: they seem to have been compiled from bearings and rough distances gleaned from repeated voyages, written itineraries, or other charts. The radiating lines of constant direction commonly found on these charts appear to have been used for navigation purposes rather than in their compilation, for they are usually added later, and are rarely found in the same place on two charts. The mention of the magnetic compass on board ship in the 13th century has led some to associate it with these lines.

How to go about it

For questions 1–5:

- First read the sentence beginnings and then the endings.
- Check for beginnings and endings that don't fit together.
- Scan the reading passage for words or paraphrases of words in the sentence beginnings. Put a box around the words in the text to help you refer to them.
- Match the endings to the words you have located in the text.

Complete each sentence with the correct ending, A–G, below.

- 1 The analysis of a map
- 2 Awareness of one's surroundings
- 3 A land map
- 4 A Neolithic example
- 5 The term cartography

- A teaches us about the trade and commerce.
 B indicates the main settlements in antiquity.
 C reveals its impact on human development.
 D conjures up images that are related to developed, as opposed to traditional societies.
 E develops through practice and contact with different people.
 F serves very little purpose for isolated communities.
 G contains an image of a town.

Questions 6–11

Complete the table below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

The ways different groups used maps

People	Use
Ojibwa	employed maps where 6..... and were brought together
Australian Aborigines	recorded information on various materials including 7
Dogon	combined bearings in the 8 with the 9 of their living spaces

Apache	marked sticks as a memory aid for 10
Mesopotamians	used geometry and surveying for various reasons with details recorded on 11

Questions 12 and 13

Choose **TWO** letters, **A–E**.

Which **TWO** features of the creating of manuscript sea charts are mentioned by the writer in the passage?

- A** The lines on the maps were drawn as the maps were made.
- B** The lines on the maps seem to be used for map reading at sea.
- C** The lines are always located in the same place on sea charts.
- D** Other charts were not used in the creation of sea charts.
- E** The process of making the maps is apparently identical in each case.