

The Earth and the Graticule

EXERCISE [PAGES 8 - 9]

Exercise | Q A .(1) | Page 8

Choose the correct option.

What term is used for the imaginary east-west horizontal lines on the earth?

1. Meridians
2. International Date Line
3. Parallels

Solutions : Parallels

Exercise | Q A. (2) | Page 8

Choose the correct option.

What is the shape of the meridians?

1. Circular
2. Semicircular
3. Points

Solutions : Semicircular

Exercise | Q A. (3) | Page 8

Choose the correct option.

What do the parallels of latitude and meridians of longitude together form on the globe?

1. Angular distance
2. Hemisphere
3. Graticule

Solutions : Graticule

Exercise | Q (A). (4) | Page 8

Choose the correct option.

How many parallels are there in the northern hemisphere?

1. 90
2. 89
3. 91



Solutions : 90

Exercise | Q A . (5) | Page 8

Choose the correct option.

Which circle forms the eastern and western hemispheres?

1. 0° parallel and 180° meridian
2. 0° Prime Meridian and 180° meridian
3. North and South Polar circles

Solutions : 0° Prime Meridian and 180° meridian

Exercise | Q A . (6) | Page 8

Choose the correct option.

Which circle appears as a point on the globe?

1. Equator
2. North/South Pole
3. Prime Meridian

Solutions : North/South Pole

Exercise | Q A. (7) | Page 8

Choose the correct option.

How many places on the earth may be located on 45°N parallel?

1. one
2. many
3. two

Solutions : many

Exercise | Q (B) . (1) | Page 8

Observe a globe and examine the following statements. Correct the wrong one.

Parallels of latitude lie parallel to the Prime Meridian.

1. Right
2. Wrong

Solutions : Parallels of latitude lie parallel to the Prime Meridian. - Wrong

Correct statement - Parallels of latitude lie parallel to the equator.



Exercise | Q B . (2) | Page 8

Observe a globe and examine the following statements. Correct the wrong one.

All parallels of latitude converge at the equator.

1. Right
2. Wrong

Solutions : All parallels of latitude converge at the equator. - **Wrong**

Parallels of the latitude do not converge at any point.

Exercise | Q (B) . (3) | Page 8

Observe a globe and examine the following statements. Correct the wrong one.

Parallels and meridians are imaginary lines.

1. Right
2. Wrong

Solutions : Parallels and meridians are imaginary lines. - **Right**

Exercise | Q (B) . (4) | Page 8

Observe a globe and examine the following statement. Correct the wrong one.

8° 4' 65" is a north meridians.

1. Right
2. Wrong

Solutions : 8° 4' 65" is a north meridians. - **Wrong**

Correct statement - 8° 4' 65" is a north parallel of latitude

Exercise | Q (B) . (5) | Page 8

Observe a globe and examine the following statement. Correct the wrong one.

Meridians are parallel to each other.

1. Right
2. Wrong

Solutions : Meridians are parallel to each other. - **Wrong**

Correct statement - The parallels of latitude are parallel to each other, whereas the meridians converge at the poles.

Exercise | Q C | Page 8

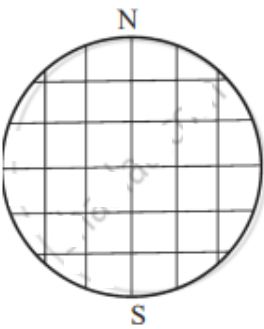


Find the correct graticule out of the following.

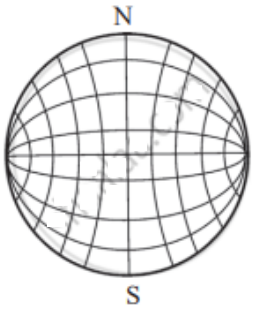
1.



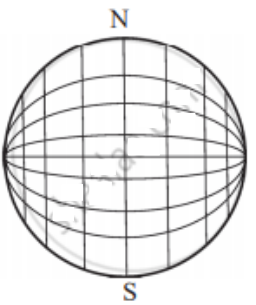
2.



3.



4.



Solutions :



Exercise | Q (D) (1) | Page 9

Answer the following:

How will you express the latitude and longitude of the North Pole?

Solutions :

1. The parallel of latitude at the North Pole is 90°N .
2. All the meridians of longitudes pass through the North Pole. Hence, the North Pole does not have any specific value for longitude.

Exercise | Q (D) . (2) | Page 9

How much is the angular distance between the Tropic of Cancer and Tropic of Capricorn?

Solutions :

1. The angular distance between Tropic of Cancer and the equator is $23^{\circ}30'$ and that between Tropic of Capricorn and the equator is $23^{\circ}30'$.
2. Since both of these parallels lie on either side of the equator, the total angular distance between both of them is $23^{\circ}30' + 23^{\circ}30' = 46^{\circ}60' = 47^{\circ}$.

Exercise | Q (D) . (3) | Page 9

Using a globe, write down the names of the countries through which the equator passes.

Solutions : Ecuador, Colombia, Brazil, Sao Tome and Principe, Gabon, Republic of the Congo, Democratic Republic of the Congo, Uganda, Kenya, Somalia, Maldives, Indonesia, and Kiribati are the 13 countries through which the equator passes.

Exercise | Q (D) .(4) | Page 9

Write down the main uses of the graticule.

Solutions :

1. Graticule is mainly used to determine the exact location of a place on the earth.
2. Some of the modern-day applications of the graticule are the Geographical Information System (GIS), Global Positioning System (GPS), Google Maps, Wikimapia, and Bhuvan of ISRO on the internet.

Exercise | Q E | Page 9

Complete the following table.

Characteristics	Parallels of latitude	Meridians of longitude
Shape		
Size	Size of each parallel is different.	
Distance		Distance between two meridians is larger on the equator and the same decreases towards the Poles.

Solutions :

Characteristics	Parallels of latitude	Meridians of longitude
Shape	Each parallel of latitude is circular in shape.	Each meridian of longitude is semi-circular in shape.
Size	Size of each parallel is different.	Size of each meridian is the same
Distance	Distance between any two adjacent parallels is the same everywhere on the surface of earth.	Distance between two meridians is larger on the equator and the same decreases towards the Poles.