

Latitudes

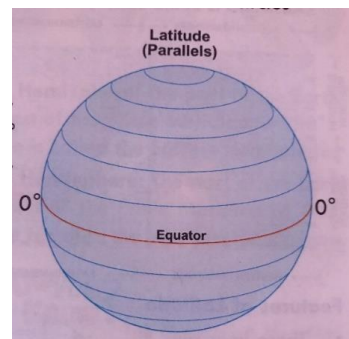
Latitudes

Lines of Latitude are east-west circles around the globe. Equator is the 0° latitude. It runs through the centre of the globe, halfway between the north pole and the south pole which are at 90° .

Equator 0
North pole 90°N
South pole 90°S

The Equator divides the Earth into two equal halves called hemispheres:

1. **Northern Hemisphere:** The upper half of the Earth to the north of the equator is called Northern Hemisphere.
2. **Southern Hemisphere:** The lower half of the earth to the south of the equator is called Southern Hemisphere.



Features of Latitude

- These lines run parallel to each other. They are located at an equal distance from each other. They are also called Parallels.
- All Parallels form a complete circle around the globe. North Pole and South Pole are however shown as points.
- Equator is the biggest circle. The circles gradually become shorter as we move away from the equator towards the poles.

Numbering of the Parallels

- The numbering of the parallels starts from the equator which is located at 0° . Parallels are marked from 0° to 90° degrees.
- Parallels are drawn at the interval of 1° .
- There are 90 parallels in the Northern Hemisphere, and 90 in the Southern Hemisphere. Thus there are 181 parallels in all including the Equator.
- The parallels in the Northern Hemisphere are marked 'N' and the parallels in the Southern Hemisphere are marked 'S'.

Important Parallels

There are some other special parallels which have been given special names. They are: Latitudes tell us how far north or south from the equator a place is.

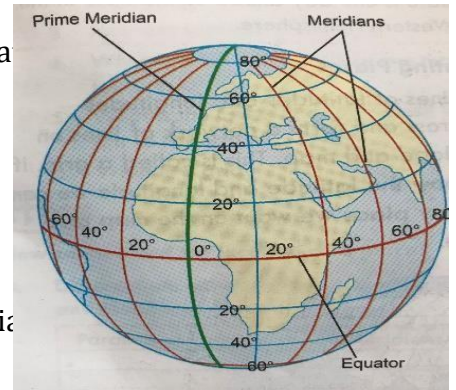
$23\frac{1}{2}^\circ$	N latitude	Tropic of Cancer
$23\frac{1}{2}^\circ$	S latitude	Tropic of Capricorn
$66\frac{1}{2}^\circ$	N latitude	Arctic Circle
$66\frac{1}{2}^\circ$	S latitude	Antarctic Circle

Longitudes

Longitudes

The semicircles running from North to South on a globe or map are called Lines of Longitudes or meridians.

The Prime Meridian is the most important line of longitude. It is located at zero degrees longitude (0°). The Prime Meridian runs through Greenwich, a place near London. It is the starting point for numbering meridians.



Greenwich Meridian

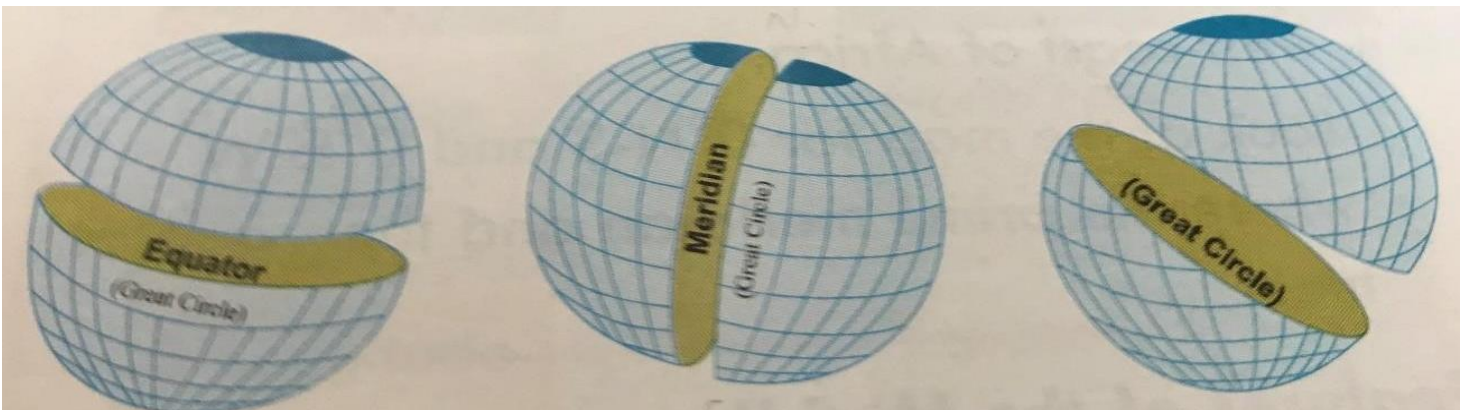
It divides the Earth in two halves from top to bottom:

Eastern Hemisphere The part of the Earth to the east of the Prime Meridian to 180° longitude is called the Eastern Hemisphere.

Western Hemisphere:- The part of the Earth to the west of the Prime Meridian to 180° longitude is called the Western Hemisphere.

There are 360 meridians- 180 to the east and 180 to the west of the Prime Meridian. The meridians in the Eastern Hemisphere are marked as 'E' and meridians in the Western Hemisphere are marked as 'W'.

The meridian of 180° E and meridian of 180° W are in the same line. Longitude describes how far east or west a place is located from the Prime Meridian.

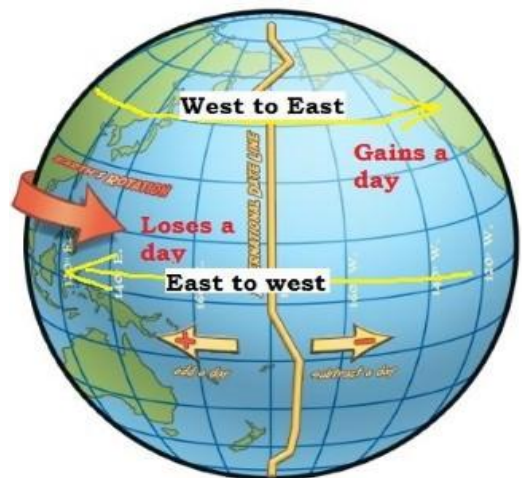


Features of the Meridians:-

- Unlike latitudes all meridians are of the same length.
- The distance between two meridians is greatest at the equator.
- As we move away from the equator towards the poles, the distance between the meridian gradually decreases.
- Meridians cut the latitudes at right angles.

Locating places

The lines of latitudes and longitudes crisscross and form a network of lines on the globe and map. This is called a grid. If we know the latitude and longitude we can find any place we want on the map or a globe. the intersection of latitude and



longitude lines, i.e. the place where they meet, is called coordinates it helps in identifying the exact location of a place.

Longitude and Time

Since the earth makes one complete revolution of 360° in one day or 24 hours, it passes through 15° in one hour or 1° in 4 minutes.

- The earth rotates from west to east, so every 15° we go eastwards, local time is advanced by 1 hour. Conversely, if we go westwards, local time is retarded by 1 hour.
- We may thus conclude that places east of Greenwich see the sun earlier and gain time, whereas places west of Greenwich see the sun later and lose time.
- If we know G.M.T., to find local time, we merely have to add or subtract the difference in the number of hours from the given longitude.

