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## Ch 2: Parallels and Meridians

See the video [https://youtu.be/s0AX3IJ\\_H78](https://youtu.be/s0AX3IJ_H78) carefully

# Parallels and Meridians

## Get Set!

Look at a globe. There are some lines on it. Fill in the missing letters to complete their names.

- |   |   |
|---|---|
| 1. E <u>Q</u> <u>U</u> <u>A</u> <u>T</u> <u>O</u> <u>R</u>  | 4. <u>T</u> <u>R</u> <u>O</u> <u>P</u> <u>I</u> <u>C</u> of <u>C</u> <u>A</u> <u>P</u> <u>T</u> <u>I</u> <u>C</u> <u>E</u> <u>N</u>       |
| 2. T <u>O</u> <u>P</u> <u>I</u> <u>C</u> of <u>C</u> <u>A</u> <u>N</u> <u>C</u> <u>E</u> <u>R</u>       | 5. <u>A</u> <u>N</u> <u>T</u> <u>A</u> <u>R</u> <u>C</u> <u>T</u> <u>I</u> <u>C</u> <u>C</u> <u>I</u> <u>R</u> <u>C</u> <u>L</u> <u>E</u> |
| 3. A <u>R</u> <u>C</u> <u>T</u> <u>I</u> <u>C</u> <u>C</u> <u>I</u> <u>R</u> <u>C</u> <u>L</u> <u>E</u> | 6. <u>P</u> <u>R</u> <u>I</u> <u>M</u> <u>E</u> <u>M</u> <u>E</u> <u>R</u> <u>I</u> <u>D</u> <u>I</u> <u>A</u> <u>N</u>                   |

**Y**ou have read that the Earth is spherical in shape. To find the location of places on the Earth, we need certain imaginary lines as reference. These lines are called parallels and meridians.

The Earth rotates on its **axis**. It is an imaginary line drawn through the centre of the Earth. The end points on the axis are called **poles**. The poles are used as two fixed points. The point on the top is the **North Pole**. The one at the bottom is the **South Pole**.

### PARALLELS

A set of circles is drawn on the surface of the globe. These circles run from east to west. They are called parallels or lines of latitude.

The Earth is divided into two equal parts by drawing an imaginary line midway between the North Pole and the South Pole. This line is called the **Equator**. It is the longest parallel. The part of the Earth which lies to the north of the Equator is called the **Northern Hemisphere**. The other half, known as the **Southern Hemisphere**, lies to the south of the Equator.

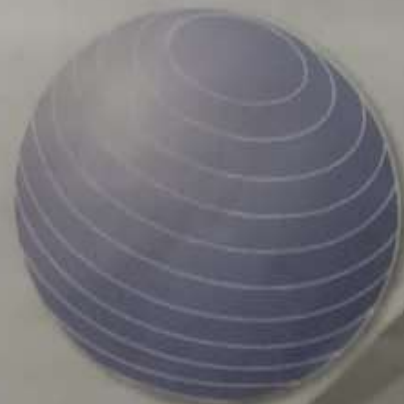


Fig. 2.1 Parallels are lines of latitude.

### FactWise

The word 'latitude' originates from the Latin word *latus* which means wide. The word 'meridian' originates from the Latin word *meridies* which means midday. It is from the word meridian that we get words such as *ante meridiem* (a.m.) meaning 'before noon' and *post meridiem* (p.m.) meaning 'after noon.'

### Important features of parallels

- All parallels are complete circles, except for the North Pole and the South Pole. These are points.
- The length of the parallels decreases as we move away from the Equator and towards the poles.
- All parallels are located at an equal distance from each other.
- Parallels neither touch nor cross one another.

### How are parallels numbered?

We start from the Equator and mark it as  $0^\circ$  latitude. We mark the other parallels from  $0^\circ$  to  $90^\circ$ . Apart from their value, the parallels are also marked N (North) or S (South), according to their location. The North Pole is written as  $90^\circ\text{N}$ . The South Pole is written as  $90^\circ\text{S}$ . Parallels are drawn at intervals of one degree. There are 90 parallels in the Northern Hemisphere and 90 parallels in the Southern Hemisphere. Therefore, there are 181 parallels in all, including the Equator.



Fig. 2.2 Important parallels

### Important parallels

Other than the Equator ( $0^\circ$ ), the North Pole ( $90^\circ\text{N}$ ) and the South Pole ( $90^\circ\text{S}$ ), there are four other important parallels. These are

- the Tropic of Cancer ( $23\frac{1}{2}^\circ\text{N}$ )
- the Tropic of Capricorn ( $23\frac{1}{2}^\circ\text{S}$ )
- the Arctic Circle ( $66\frac{1}{2}^\circ\text{N}$ )
- the Antarctic Circle ( $66\frac{1}{2}^\circ\text{S}$ )

The Arctic and the Antarctic circles are also called **polar circles**.



### Checkpoint

Write T for True or F for False

1. The east-west lines drawn on a globe are called parallels.
2. All parallels are of the same length.
3. The North Pole lies in the Southern Hemisphere.
4. The Tropic of Cancer lies in the Northern Hemisphere.

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Fill in the blanks:

1. A set of imaginary circles and semi circles run across the \_\_\_\_\_
2. The full horizontal circles are called \_\_\_\_\_ or parallels as they are drawn parallel to the equator.
3. The length of the parallels decreases as we move away from the equator towards the \_\_\_\_\_
4. The North Pole and the South Pole are \_\_\_\_\_
5. The parallels are located at an equal distance from \_\_\_\_\_ other.
6. There are \_\_\_\_\_ parallels in total.
7. Some Important latitudes are \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_
8. Write the degree of the following latitude:
  - 1) Equator \_\_\_\_\_
  - 2) Tropic of cancer \_\_\_\_\_
  - 3) Tropic of Capricorn \_\_\_\_\_
  - 4) Arctic Circle \_\_\_\_\_
  - 5) Antarctic Circle \_\_\_\_\_
9. \_\_\_\_\_ is the longest parallel.
10. The part of the earth which lies to the north of the equator is called \_\_\_\_\_ hemisphere.
11. The part of the earth which lies to the south of the equator is called \_\_\_\_\_ hemisphere.
12. The Arctic and the Antarctic circles are also called \_\_\_\_\_

Answer:

1. Globe
2. Latitude
3. Poles
4. Points
5. Each
6. 181
7. Equator, Tropic Of Cancer, Tropic of Capricorn, Arctic Circle, Antarctic Circle
8.
  1.  $0^{\circ}$
  2.  $23 \frac{1}{2}^{\circ}$  N
  3.  $23 \frac{1}{2}^{\circ}$  S
  4.  $66 \frac{1}{2}^{\circ}$  N
  5.  $66 \frac{1}{2}^{\circ}$  S
9. Equator
10. Northern Hemisphere
11. Southern Hemisphere
12. Polar Circles