MAPS AND GLOBES

A map is a visual representation of an area that shows where things are located.

It helps you understand places, distances, directions, and how different features relate to each other.

What maps usually show:

- Countries, cities, and towns
- Roads and transportation routes
- Mountains, rivers, and forests
- Boundaries between regions
- Important landmarks

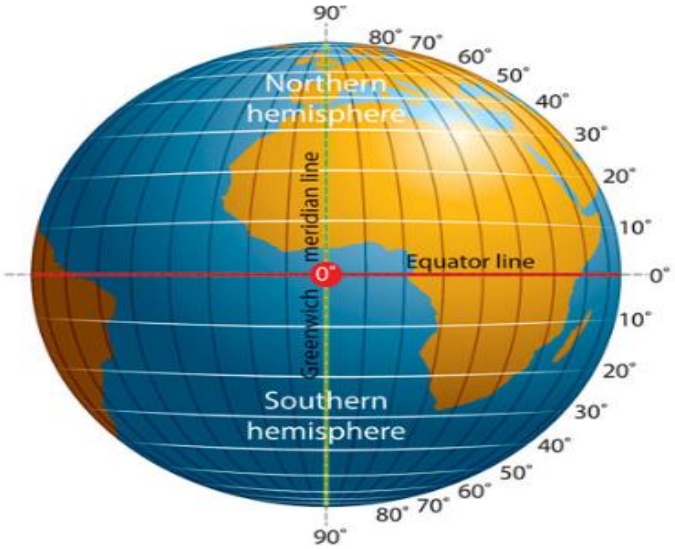
A globe is a three-dimensional (3D) model of the Earth.

It shows the planet in a round shape, just like it actually is.

What a Globe Shows:

- Continents and oceans
- Countries and borders
- Lines of latitude and longitude
- The equator and poles
- Physical features (mountains, deserts, etc., depending on the type of globe)

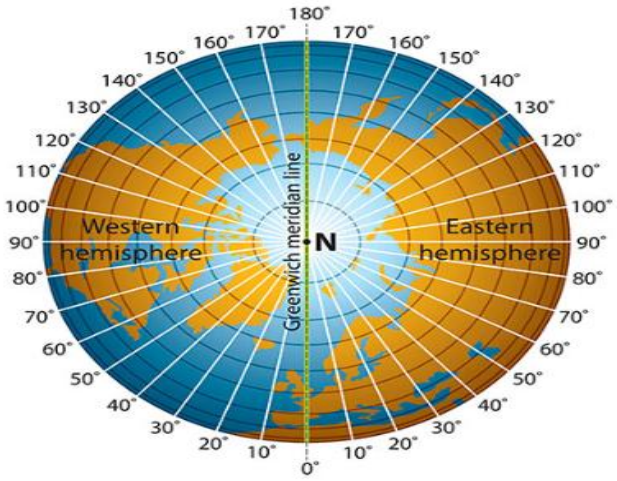
LINES OF LATITUDE



Lines of latitude are imaginary horizontal lines drawn around the Earth, running east–west.

- They help us measure how far a place is north or south of the Equator.
- They are also called parallels because they never meet and stay the same distance apart.
- The Equator (0° latitude) is the most important latitude line.
- Latitude is measured in degrees (°) from 0° to 90° north or south.
- They help us determine climate zones, seasons, and the position of places on a map.
- Lines of latitude tell us how far up or down a place is on the Earth.

LINES OF LONGITUDE



Lines of longitude are imaginary vertical lines that run from the North Pole to the South Pole

They help us measure how far a place is east or west of the Prime Meridian.

They are also called meridians.

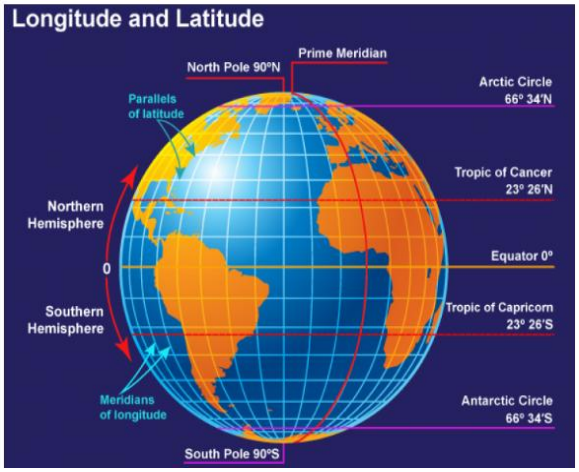
Unlike latitude lines, they meet at the poles.

Longitude is measured in degrees (°) from 0° to 180° east or west.

Prime Meridian (0° longitude) runs through Greenwich, England.

Divides the Earth into the Eastern Hemisphere and Western Hemisphere.

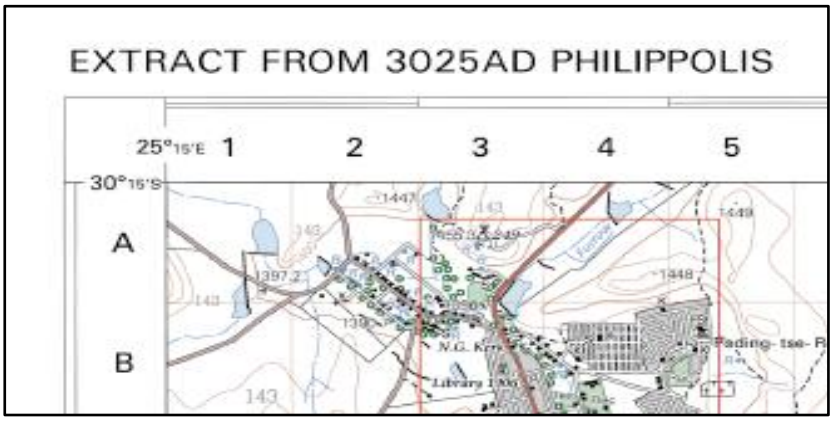
How Latitude and Longitude Work Together



Latitude and longitude are like a grid system on Earth. When combined, they allow us to find the exact location of any place in the world.

- Latitude = How far north or south; Lines run horizontally (east–west).
- Measured from the Equator (0°) up to 90° North or South.
- Longitude = How far east or west, Lines run vertically (north–south).
- Measured from the Prime Meridian (0°) up to 180° East or West.
- When you combine a latitude value and a longitude value, you get a coordinate — an exact point on Earth.

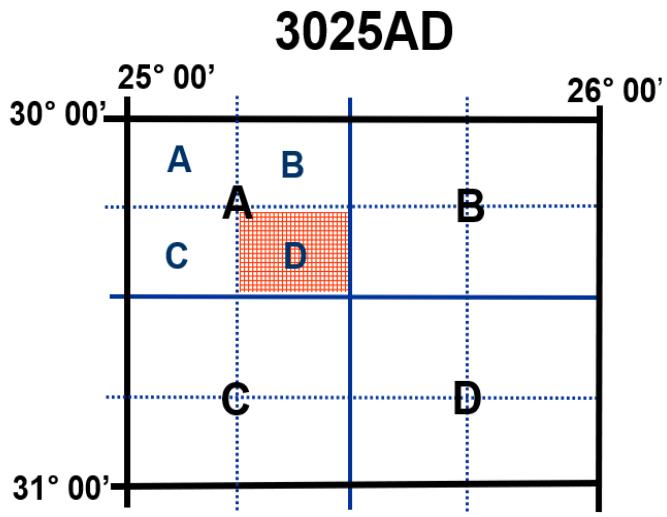
Coordinates



Each topographic map of South Africa comes with a title which is numbered according to the following method: **3025AD PHILIPPOLIS**

- 30 – Latitude (south degrees)
- 25 – Longitude (east degrees)
- A - in which quarter of the degree is this map found
- D – in which quarter of that quarter is the map found

Map index



Locate places on maps using degrees and minutes

Maps that show larger areas have big spaces between each degree of latitude and longitude. To make locating places easier on these maps, we divide each degree into smaller units called minutes.

There are 60 minutes in one degree – that’s a lot of lines!

Using the atlas index to find places on a map

ATLAS INDEX

Town/City	Description	Latitude	Longitude	Page
Atlanta	Capital City of Georgia	34°N	84°W	41
Boston	Capital of Massachusetts	42°N	71°W	41
Dallas	City of Texas	22°N	97°W	41
Guadalajara	City in Jalisco	21°N,	103°W	52
Mexico City	Capital of Mexico			27
Monterrey	City in Nuevo Leon			52
Toronto	Capital of Ontario - Canada	44°N,	79°W	27, 35
Vancouver	City of British Columbia	49°N,	123°W	34

Adapted from https://www.mrpsocialstudies.com/2-glossary--index-getting-to-know-your-atlas-l2.html

An atlas is a book or collection of maps.

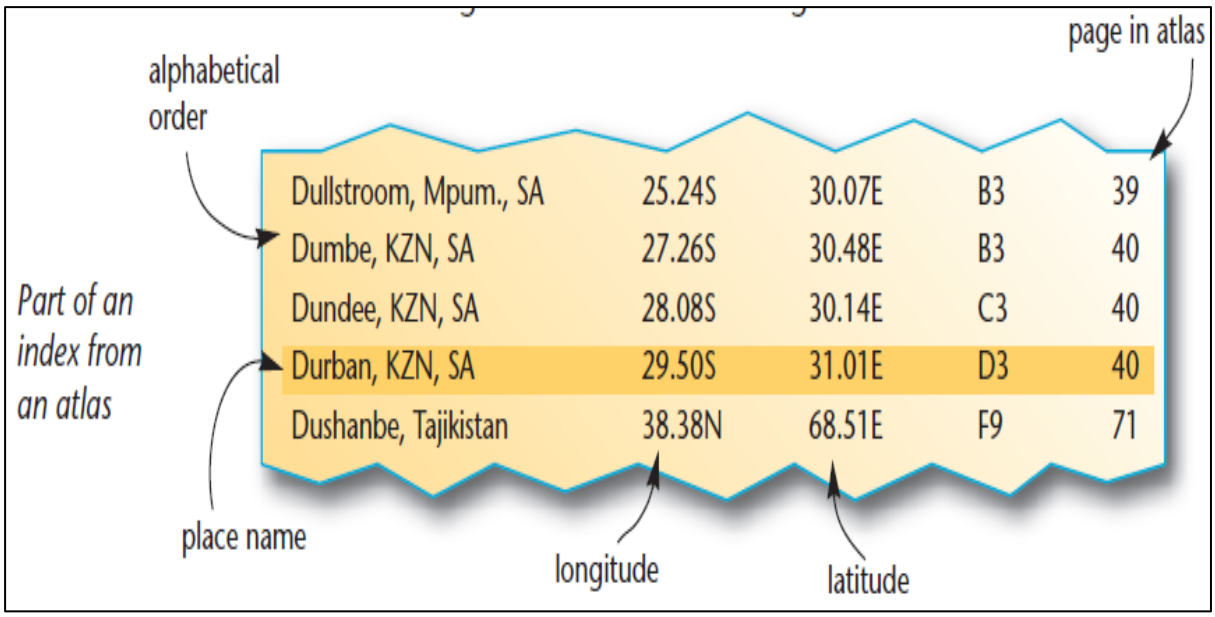
It brings many maps together in one place so you can learn about different parts of the world

An index lists names of places in alphabetical order.

The atlas index is at the back of the atlas.

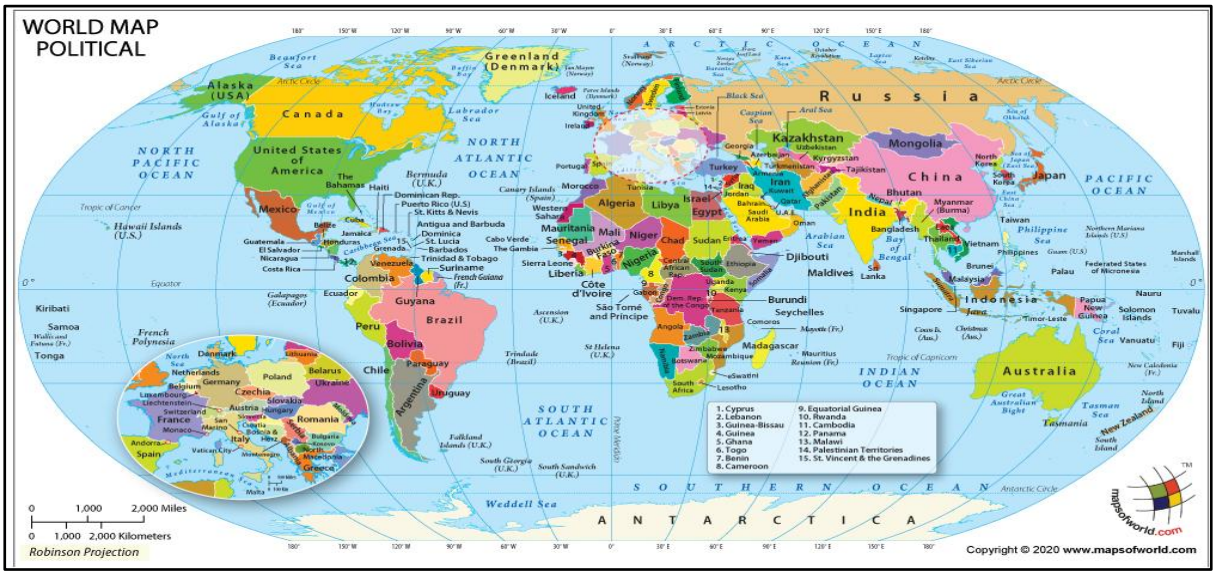
You will see a set of numbers next to each place name in the index.

These are the latitude and longitude co-ordinates in degrees and minutes.



KINDS OF SCALES IN AN ATLAS

World scale

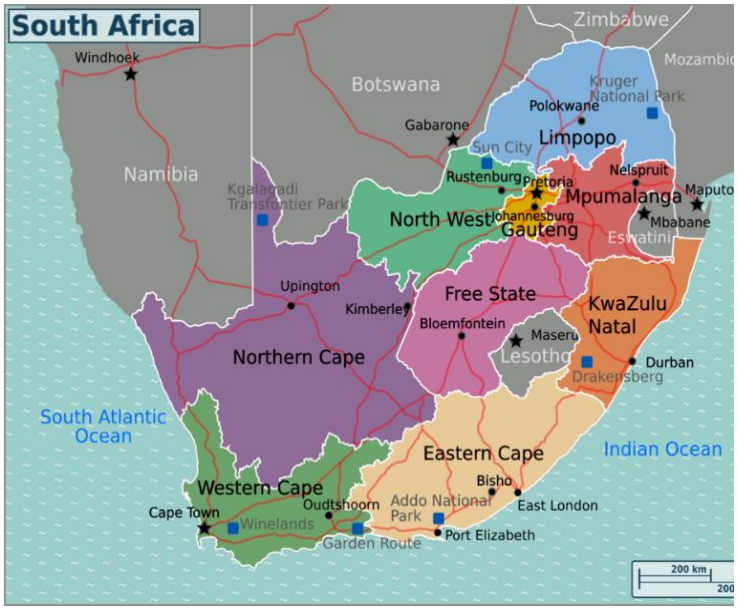


1 cm on the map equals 10 000 km in reality/on the ground.

Smallest scale. Features are very small, some not visible.

Shows the largest area

Regional scale



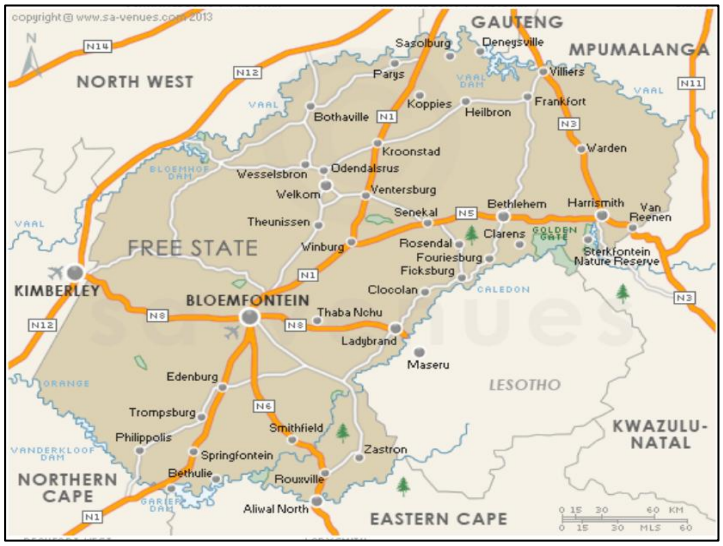
1 cm on the map equals 200 km in reality/on the ground

Larger scale

Big/large details, some are visible

Shows a Small area

Local Scale

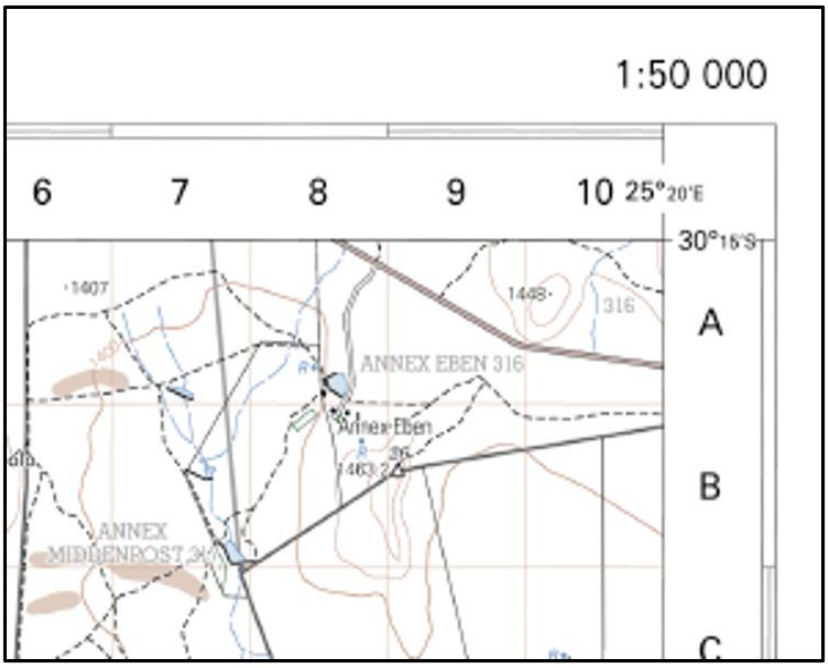


1 cm on the map equals 15 km in reality/on the ground **Largest Scale**

All details are clear – largest

Smallest area

Map scale

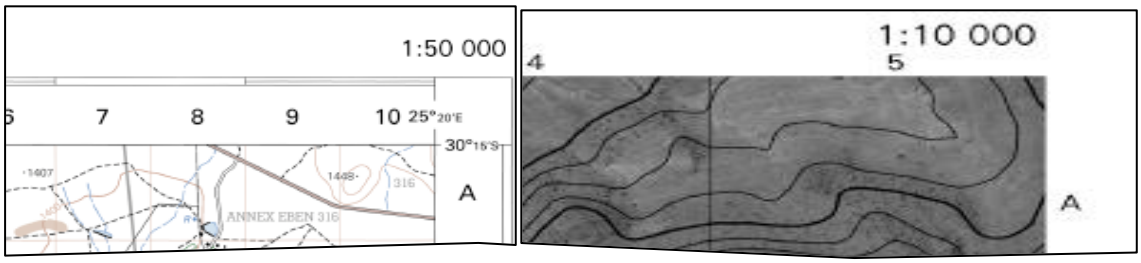


A map scale shows the relationship between a distance on a map and the actual distance on the ground.

The map scale converts real distances on the ground to smaller distances on the map.

TYPES OF SCALES

Ratio Scale (Representative Fraction – RF Scale)



This scale is written as a ratio, such as:

1: 50 000

1: 10 000

The ratio tells you that 1 unit on the map = 50 000 units on the ground.

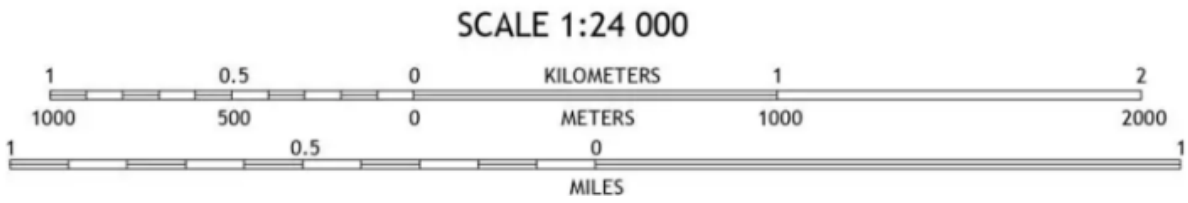
The units can be measured centimeters

Word / Statement Scale

1 cm on the map equals 50 000 cm in reality/on the ground.

This scale explains the distance using words.

Line Scale (Linear Scale)



This is a line drawn on the map that shows actual ground distances.

Calculate distance

DISTANCE=

Map distance x Scale = Answer in km/ m

Straight line distance

It is calculated by measuring the distance between two points given.

We use centimetres (cm) and convert to either meters or kilometres depending on the question

Conversions when calculating distance	
Topographical map (1:50 000)	**Orthophoto map (1:10 000)**
1cm x 0.5 = km	**cm x 0.1=km**
1cm x 500=m	**cm x 100=m**

DISTANCE= Map distance x Scale = Answer in km/ m

1. measure distance on map

2. multiply by the map scale

3. provide an answer in kilometers or meters.