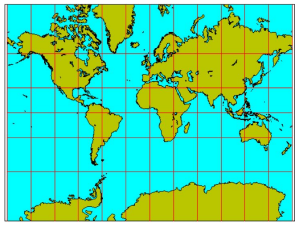
1

Types of Maps:

- Mercator (1569)
  - Longitude lines are parallel
  - Still used by sailors today



2

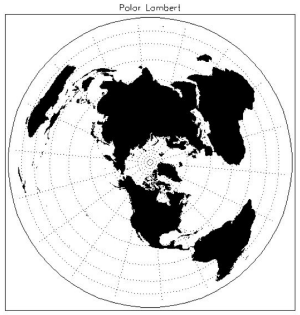
Types of Maps:

- Conic – wrap a cone around a globe
  - Used to make road and weather maps

3

Types of Maps:

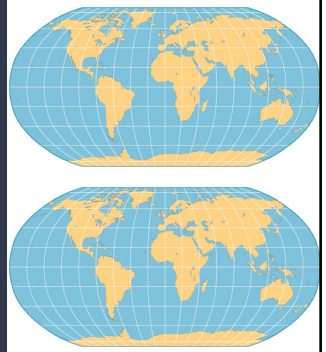
- Gnomic – looking down on the North Pole
  - Used by sailors travelling across the ocean



4

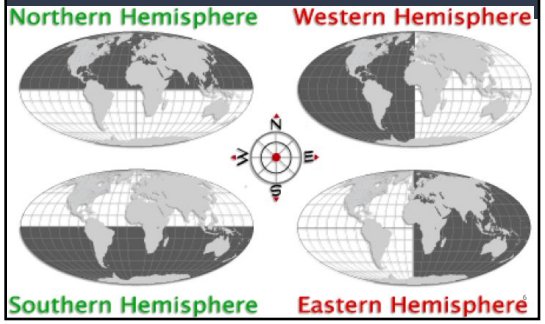
Types of Maps:

- Robinson
  - Most widely used
  - Distance distorted around the edges of the map (polar regions)



5

Latitude & Longitude

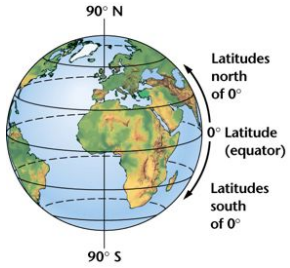


6

Latitude

Runs parallel to equator *(horizontal)*

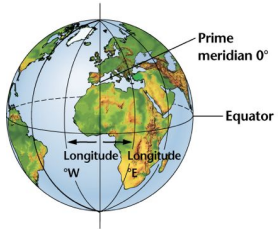
Distance in degrees North/South of *equator*



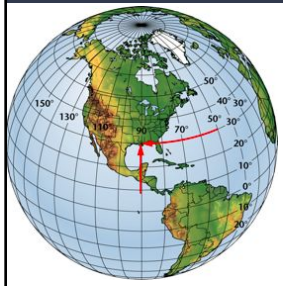
Longitude

Distance in **degrees** East/West *(vertical)* of *prime meridian*

Prime meridian – line running through Greenwich, England



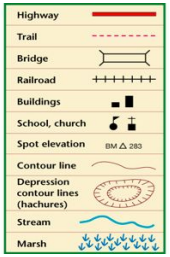
Coordinates

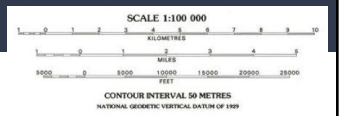


Latitude comes first, then **longitude**

New Orleans = 29° 57' N, 90°04' W

Scales

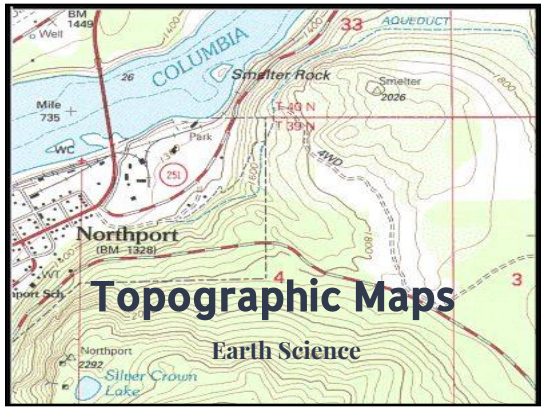




DEFINITION: ***Ratio*** between distance on **map** vs on the **ground**

Ex: **1:15,000**

1 unit on map = *15,000* units on ground

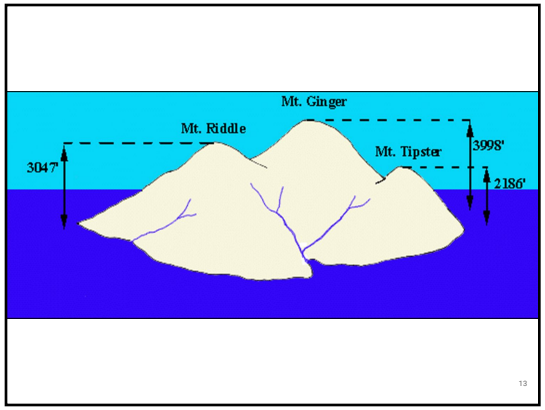


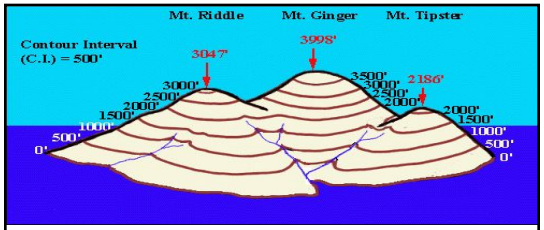
Topographic Maps

- Maps that show the surface features of the Earth
- Show elevation at different locations (aka height above sea level)

Examples of features found on a topographic map include:

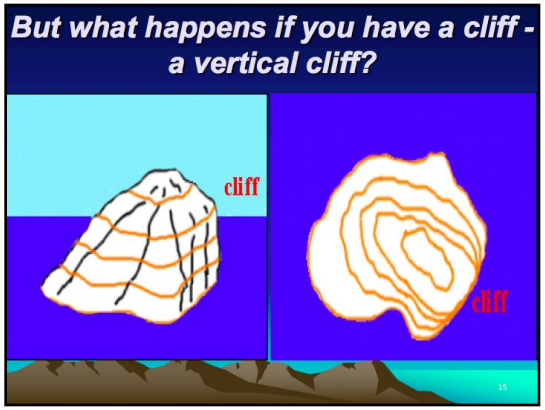
- Hills
- Rivers
- Valleys
- Mountains



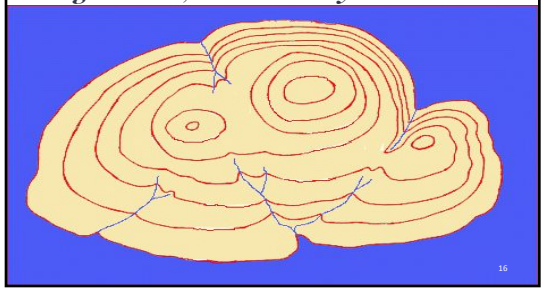


Contour Lines:

- Lines of EQUAL elevation
- Measure vertical distance between 2 points
- Lines will NEVER cross. Why not?

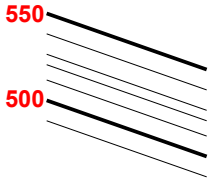


If you flew over the island and looked straight down, this is what you would see...

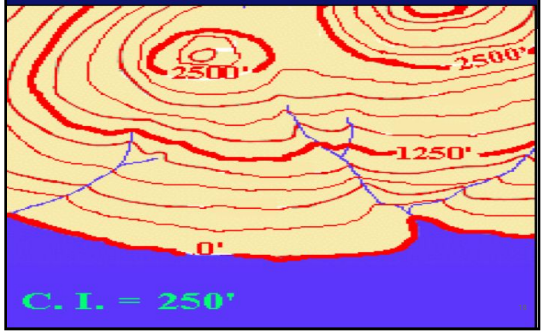


Contour Index

- Created by bolding every 5th contour line and labeling its elevation

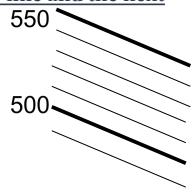


- **Index Contour Lines:**
  - Shows *ACTUAL* elevation values



Contour Interval

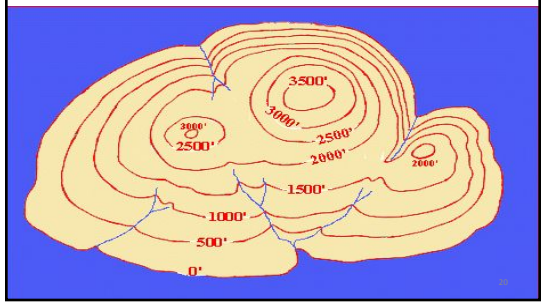
- The difference in elevation between one contour line and the next



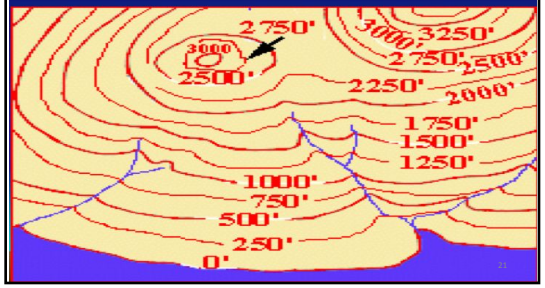
Contour interval: 550 – 500 = 50
50/5 = 10 ft contour interval

19

Contour Interval on this map = 500 feet

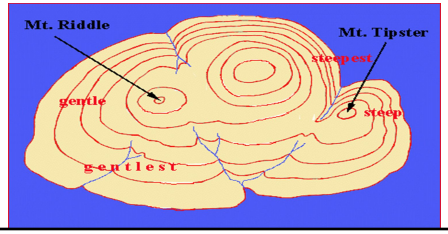


- *If we made the contour interval **250 ft** each, we would have twice as many contour lines*



Steepness/Gradient

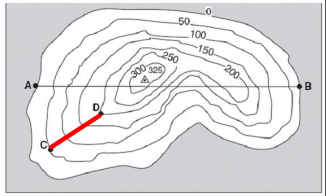
- Closer contour lines = steeper hill/valley
- Further contour lines = flatter hill/valley



22

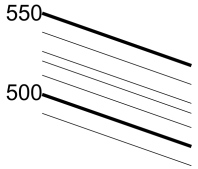
Determining Gradient

Elevation (ft) = Gradient (ft/mi)
Distance (mi)



(200ft - 50 ft) = 25 ft/mi
6 mi

Relief

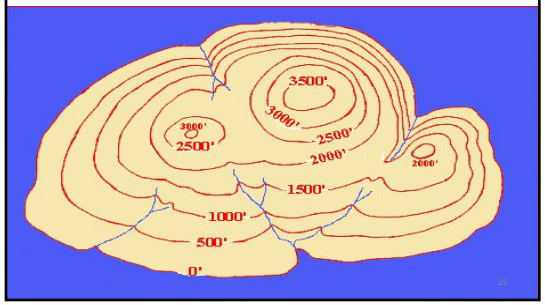


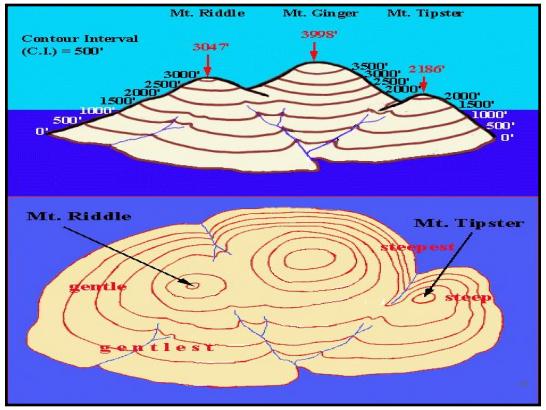
- The difference between the highest and lowest points on a map

Highest elevation - Lowest elevation = Relief
550 feet - 490 feet = 60 ft

24

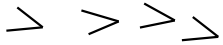
Relief on this map = 3500 *feet*





Rivers

Rule of Vs: Vs indicate a valley, river, or stream



- Rivers always run from high to low elevation
- Vs point to the start of the river

DOWNSTREAM ← Water Movement UPSTREAM