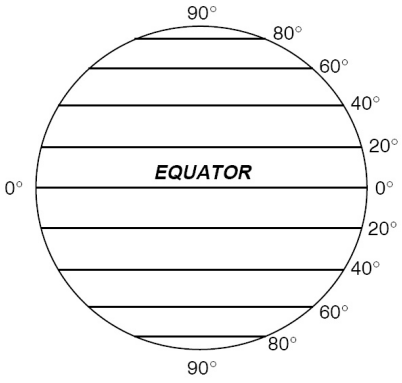
LATITUDE/LONGITUDE REVIEW SHEET

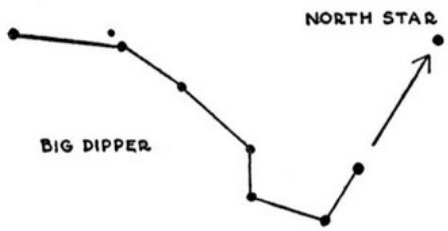
LATITUDE

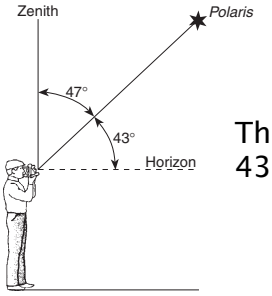


- Your distance to the north or south of the equator (0°)
- These are the horizontal lines ("flat"itude)
- The highest possible latitude is 90°N (the North Pole) or 90°S (the South Pole)
- Latitude lines are parallel to one another and are all the same distance apart

TO CALCULATE YOUR LATITUDE…

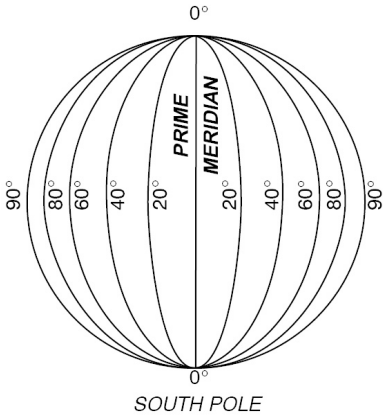
- Locate the North Star (Polaris) using the Big Dipper
- Use an astrolabe to determine the altitude of Polaris above the horizon
- The angle is equal to your latitude
- This is only true in the northern hemisphere (Polaris is not visible in the southern hemisphere)





The altitude of Polaris for this observer is 43° above the horizon, so his latitude is

LONGITUDE



- Your distance to the east or west of the Prime Meridian (0°)
- These are the vertical lines ("Long"itude)
- The highest possible longitude is 180° (the International Date Line)
- Longitude lines are not parallel to one another and the distance between them depends on where on Earth you are
- Locations to the left of the Prime Meridian are West and to the right are East.

TO CALCULATE YOUR LONGITUDE…

- The Earth rotates at 15°/hour
- Calculate how many hours there are between your time (usually solar noon, when the sun is at its highest point) and the time at a known location (usually the Prime Meridian)
- Multiply the number of hours by 15°/hour to give you your numerical longitude
  - If your time was earlier, you are in the Western hemisphere (time is less, you are west)
  - If your time was later, you are in the Eastern hemisphere (time does increase, you are east)

Time zones in the US

REMEMBER…

- Always write the latitude first
- All coordinates need a compass direction (unless you are at the equator, prime meridian, or international date line)
- 1 degree is equal to 60 minutes, use minutes on the New York state map