

Co. Latitude is the difference between the given Latitude and 90° or the Pole.

Parallels of Latitude are Circles running East & West Parallel to the Equator. places on this circle are said to lie on the same parallel of Latitude

Difference of Latitude of two places is the portion of the Meridian included between their Parallels the Difference of Latitude of a ship is therefore the distance she makes good North or South. therefore it is evident that when two places are on the same side of the Equator their difference of Latitude is found by subtracting the lesser from the greater and when they are on opposite sides it is when one place is North and the other South of the Equator and the sum of their Latitudes is the difference of Latitude

Example 1<sup>st</sup>

Find the difference of Latitude New York in Lat. 40. 43. N. and Charleston S. in Lat. 32. 46. N. Ans. Diff. Lat. 7. 57

Example 2<sup>d</sup>

Find the difference of Lat. between Cap Henry in Lat. 36. 56. N. and Cap H. Roque. 5. 28. S. Ans. Diff. Lat. 42. 24

When a ship in Northern Latitude sail North she increases her Latitude and when South and sailing South she increases it. But if in North and sailing South or South and sailing North she diminishes it. hence when one Latitude is given and the difference of Latitude the other Latitude is easily found.

Example 1<sup>st</sup>

A ship from 43. 30 S. sail 219 miles S. 43. 30 S. Required her Latitude in. 119 ÷ 60 = 3. 39 S. Ans. Lat. 47. 09 S

Example

A ship from Latitude 43. 11 N. sail 194 miles South 194 ÷ 60 = 3. 14 S. Lat in. 39. 57 N.

Longitude is the distance on the Equator between the Meridian of a given place and another. Called the first Meridian the choice of the first Meridian is arbitrary but all Nations adopt Greenwicks Observatory in England as the first Meridian

The Longitude of a place is the distance East or West of the first Meridian. or Greenwicks, it is measured in Degrees Minutes & Seconds, or in time. that is in hours minutes & seconds. each hour being equal to 15°. for the sun which regulates the time returns to the same Meridian again after describing a complete circle of 360° in 24 hours. therefore 15° x 24 = 360. the Difference of Longitude of 2 places is the distance between their Meridians

The degree of Latitude & Longitude are the same on the Equator but as the Meridian's contract and meet at the Poles. the greater the Latitude the Longitude is less. that is there is not so much space in a degree of Longitude

Example 1<sup>st</sup>

Find the Difference of Longitude New York in 74. 00 W. and Charleston S. in 79. 54 W. Diff Long. 5. 54

Example 2<sup>d</sup>

Find the Distance between Cape of Good Hope in 18° 30 E and Cape H. Roque. 35. 12 W. Ans. Diff Long. 53. 47