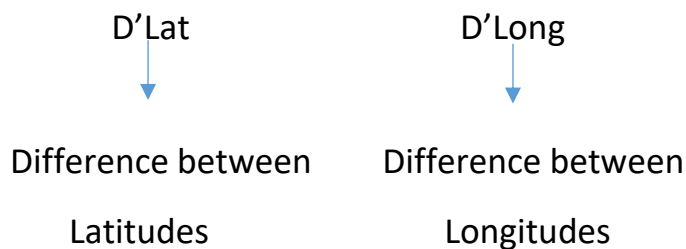# D'LAT AND D'LONG
EXERCISE-1

Note: This module will be understood best if studied along with the video provided for subscription where by same topics have been in large explained by me and hence this transcription is here only to help and enhance your concepts about the basic of D'Lat and D'Long.

In this very first section of this module we will understand the basic calculation of D'Lat and D'Long for given initial and final positions. But before proceeding towards the calculation part we must first understand what actually do we mean by D'Lat and D'long.

D'Lat	D'Long
Difference between	Difference between
Latitudes	Longitudes

Remember: They are a combination of magnitude and direction of movement.

Lat- 10°00'N   D'Lat- 10°00'N

Now at the first glance the above two look similar but actually they are different in a sense that Lat and Long have their value measured through a common reference with respect to Equator and Prime Meridian respectively while D'Lat and D'Long may have any initial Lat or Long respectively as their initial reference.

Secondly Lat and Long have their numerical references followed by 'naming' with respect to equator or the side of the prime meridian respectively while D'Lat and D'Long are followed by the direction of movement of the observer from an initial position to final position.

From the above point it is clear that naming used to indicate Lat and Long is irrespective of the direction of movement indicated with D'Lat and D'Long and thus is always given by the following arrows:-
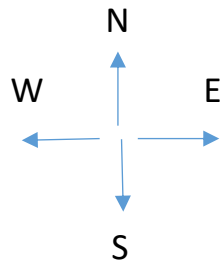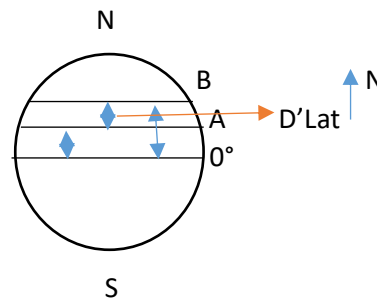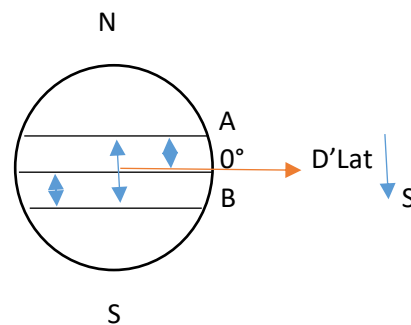

Fig 1.1

In above regard below are some examples taken up in the related video:

1. Lat A- 10°20'N
   Lat B- 30°40'N
   D'Lat- 20°20'N (Lat B – Lat A)

2. Lat A- 15°30'N
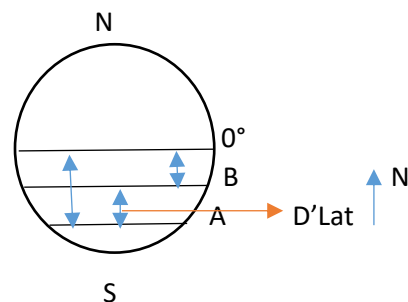   Lat B- 25°45'S
   D'Lat- 41°15'S (Lat A + Lat B)

Some more examples:-

3. Lat A- 55°40'S
   Lat B- 20°10'S
   D'Lat- 35°30'N (Lat A – Lat B)

4. Lat A- 25°50'S
    Lat B- 03°10'N
    D'Lat- 29°00'N (Lat A + Lat B)
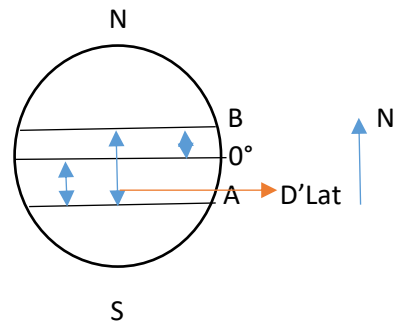
Practice Exercise:-

1. Lat A- 45°15'N
    Lat B- 62°18'N

2. Lat A- 36°22'S
    Lat B- 08°30'S

3. Lat A- 19°20'N
    Lat B- 24°55'S

4. Lat A- 56°30'S
    Lat B- 89°45'S

5. Lat A- 16°25'S
    Lat B- 28°50'N

ANSWERS:-

1. 17°03'N   2. 27°52'N   3. 44°15'S   4. 33°15'S   5. 45°15'N