

THE DIRECTION OF QIBLA:

Latitude= ϕ (N , S) in Degree

Longitude = λ (E , W) in Degree

Latitude of Qibla: $\phi_0 = 21^{\circ}25.2'$ (N)

Longitude of Qibla: $\lambda_0 = 39^{\circ}49.2'$ (E)

1. Classical longitude = $l = \lambda - \lambda_0$ (Central East)

2.
$$p = \frac{\sin \phi}{\tan l}$$

3.
$$q = \frac{\cos \phi \tan \phi_0}{\sin l}$$

• $\tan i = p - q$

where i is Direction of Qibla

Remarks:

1. The Direction of Qibla i will be South of West and South of East if i is $+ve$
2. The Direction of Qibla i will be North of West and North of East if i is $-ve$

Condition for longitude:-

Given λ In East (E) if $\lambda_0 < \lambda$ then $l = \lambda - \lambda_0$ (CE)

if $0 < \lambda < \lambda_0$ then $l = \lambda_0 - \lambda$ (CW)

Given λ In West (W) if $0 < \lambda < 180^{\circ} - \lambda_0$ then $l = \lambda + \lambda_0$ (CW)

If $180^{\circ} - \lambda_0 < \lambda < 180^{\circ}$ then $l = 360 - (\lambda + \lambda_0)$ (CE)