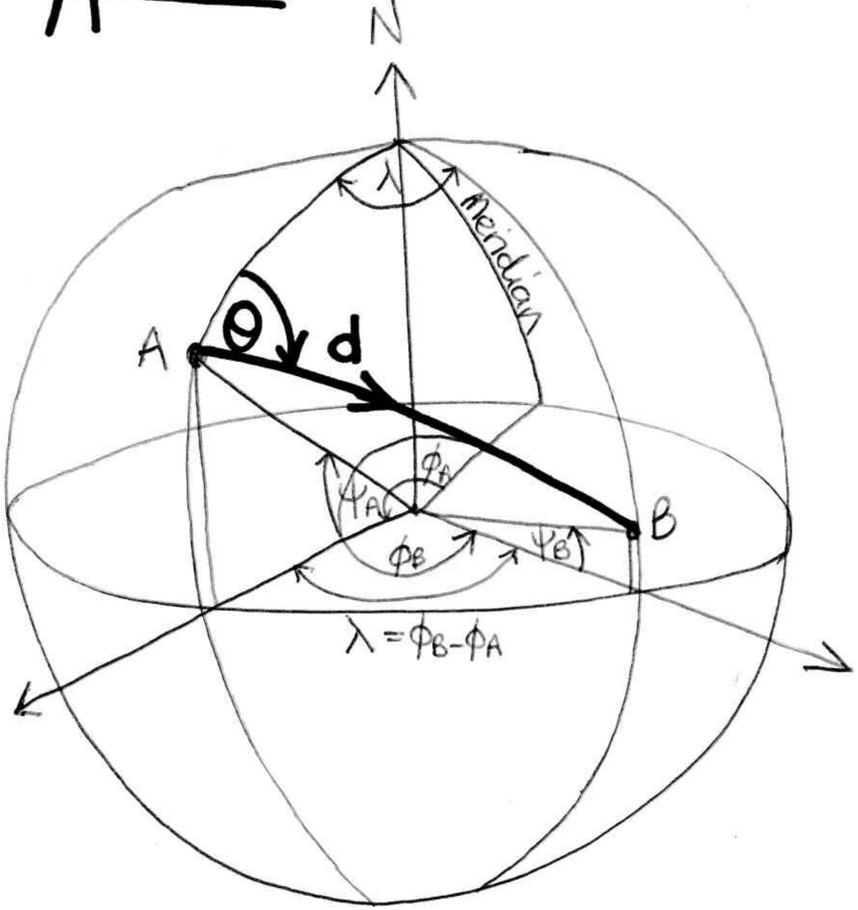
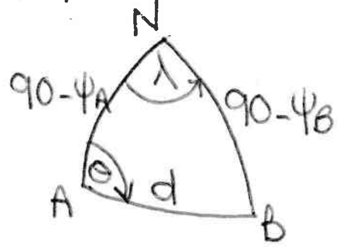
Waypoint



Longitude $\underline{\underline{\phi_B = \phi_A + \lambda}}$ where

Spherical laws of Cosines



$$\underset{\sin\psi_B}{\cancel{\cos(90-\psi_B)}} = \underset{\sin\psi_A}{\cancel{\cos(90-\psi_A)}}\cos(d) + \underset{\cos(\psi_A)}{\cancel{\sin(90-\psi_A)}}\sin(d)\cos(\theta)$$

Latitude $\psi_B = \sin^{-1}\left(\sin\psi_A\cos(d) + \cos\psi_A\sin(d)\cos\theta\right)$

$$\cos(d) = \underset{\sin\psi_A}{\cancel{\cos(90-\psi_A)}}\underset{\sin\psi_B}{\cancel{\cos(90-\psi_B)}} + \underset{\cos\psi_A}{\cancel{\sin(90-\psi_A)}}\underset{\cos\psi_B}{\cancel{\sin(90-\psi_B)}}\cos(\lambda)$$

Spherical laws of Sines

$$\frac{\sin\lambda}{\sin d} = \frac{\sin\theta}{\underset{\cos\psi_B}{\cancel{\sin(90-\psi_B)}}} \qquad \sin\lambda = \frac{\sin\theta\sin(d)}{\cos\psi_B}$$

$$\tan(\lambda) = \frac{\sin(\lambda)}{\cos(\lambda)} = \frac{\dfrac{\sin\theta\sin(d)}{\cancel{\cos\psi_B}}}{\dfrac{\cos(d) - \sin\psi_A\sin\psi_B}{\cos\psi_A\cdot\cancel{\cos\psi_B}}} \times \frac{\cos\psi_A}{\cancel{\cos\psi_A}}$$

$$\tan(\lambda) = \frac{\sin\theta.\sin(d).\cos(\psi_A)}{\cos(d) - \sin\psi_A\sin\psi_B}$$