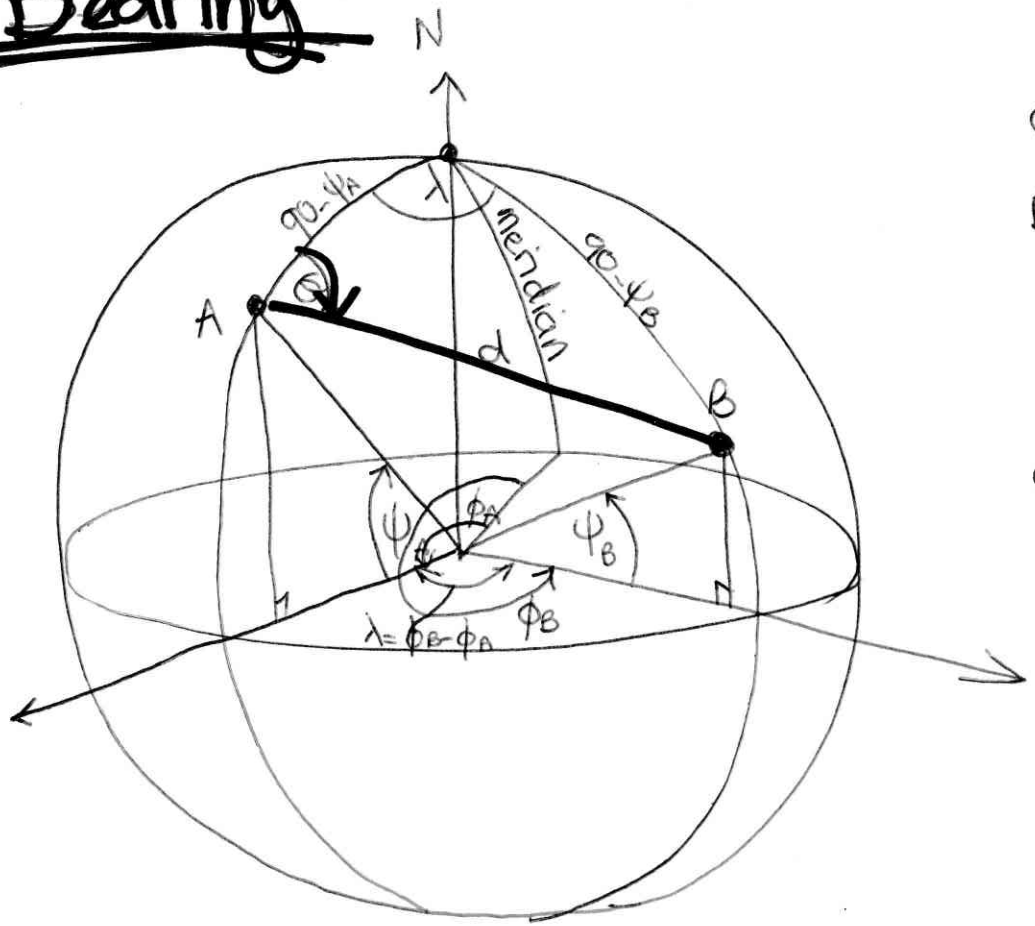
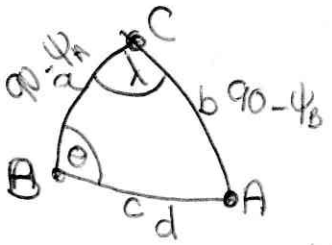
Bearing



Spherical laws of Cosines



$$\cos(d) = \cos(90-\psi_A)\cos(90-\psi_B) + \sin(90-\psi_A)\sin(90-\psi_B)\cos(\lambda)$$

($\sin\psi_A$, $\sin\psi_B$, $\cos\psi_A$, $\cos\psi_B$)

$$\cos(90-\psi_B) = \cos(90-\psi_A)\cos(d) + \sin(90-\psi_A)\sin(d)\cos(\theta)$$

($\cos(90-\psi_B) = \sin\psi_B$, $\cos(90-\psi_A) = \sin\psi_A$, $\sin(90-\psi_A) = \cos\psi_A$)

Spherical laws of Sines

$$\frac{\sin\theta}{\sin(90-\psi_B)} = \frac{\sin\lambda}{\sin(d)}$$

($\sin(90-\psi_B) = \cos\psi_B$)

$\cos^2 A + \sin^2 A = 1$

$1 - \sin^2 A = \cos^2 A$

$$\sin\theta\sin(d) = \sin\lambda\cos\psi_B$$

$$\sin\psi_B - \sin\psi_A\left(\sin\psi_A\sin\psi_B + \cos\psi_A\cos\psi_B\cos\lambda\right) + \cos\psi_A\left(\sin(d)\cos\theta\right)$$

$$(1-\sin^2\psi_A)\sin\psi_B = \sin\psi_A\cos\psi_A\cos\psi_B\cos\lambda + \cos\psi_A\left(\sin(d)\cos\theta\right)$$

($1-\sin^2\psi_A = \cos^2\psi_A$)

$$\cos\theta\sin d = \cos\psi_A\sin\psi_B - \sin\psi_A\cos\psi_B\cos\lambda$$

$$\tan\theta = \frac{\sin\theta\sin(d)}{\cos\theta\sin(d)}$$