

(0)

		0°	< LHA <	90°	< LHA <	180°	< LHA <	270°	< LHA <	360°	
		H = LHA		H = 180° - LHA		H = LHA - 180°		H = 360° - LHA			
		LHA ____°__'		- LHA ____°__'		- 180°00'		- LHA ____°__'			
		= H ____°__'		= H ____°__'		= H ____°__'		= H ____°__'			
		If H < 1° or H > 89° choose Lon _{AP} to bring H within the 1°-89° range. (I)									
W sign rule	Lat _{AP} and Dec same name	+W		-W		-W		+W			
	Lat _{AP} and Dec contrary name	-W		-W		-W		-W			

If Dec < 1°
..... (II)

(1) $\tan(W) = \tan(\text{Dec}) / \cos(H)$

$X = 90^\circ - \text{Lat}_{AP} \pm W$

(PD_{AP}) 89°60'
- Lat_{AP} ____°__'
= ____°__'
± W ____°__'
= X ____°__'

X	<	90°	<	X
Y = X			Y = 180° - X	
X ____°__'				179°60'
= Y ____°__'			- X ____°__'	= Y ____°__'

If Y > 89°
..... (III)

(2) $\tan(Az) = \cos(W) \cdot \tan(H) / \cos(Y)$

if Az > 85°
..... (IV)

(3) $\tan(Hc) = \cos(Az) \cdot \tan(Y)$

cos	cotan
set 0°	set Dec
set H	read W
	set H
	read Az
set Az	set Y
set 0°	read Hc

Azimuth rules		0°	< LHA <	180°	< LHA <	360°
Northern latitude	X < 90°	Zn = Az + 180°		Zn = 180° - Az		
		Az ____°__'	+ 180°00'	= Zn ____°__'	179°60'	- Az ____°__'
	X > 90°	Zn = 360° - Az		Zn = Az		
		359°60'	- Az ____°__'	= Zn ____°__'	Az ____°__'	= Zn ____°__'
Southern latitude	X < 90°	Zn = 360° - Az		Zn = Az		
		359°60'	- Az ____°__'	= Zn ____°__'	Az ____°__'	= Zn ____°__'
	X > 90°	Zn = Az + 180°		Zn = 180° - Az		
		Az ____°__'	+ 180°00'	= Zn ____°__'	179°60'	- Az ____°__'