BYGRAVE INSTRUCTIONAL FORM

Special rules:

If H is less than 1° or greater than 89° then choose a different assumed longitude to bring H within the range of the scales.

If declination is less than 1° omit the first step and set W equal to declination. If latitude is also less than 1° then assume a latitude of 1°. Compute Az and Zn. Interchange declination and latitude then start over again computing Hc using those values and disregard the Az derived during this second computation.

If Y is less than 1° or greater than 89° choose a different assumed latitude to bring Y within the range of the scales.

Compute Az. If Az is greater than 85° use this Az for computing Zn and for plotting the LOP. Interchange declination and latitude then start over again computing Hc using those values and disregard the Az derived during this second computation.

0 < LHA < 90	90 < LHA < 180	180 < LHA < 270	270 < LHA < 360
H = LHA _____	H = 180 - LHA _____	H = LHA - 180 _____	H = 360 - LHA 346-00 = 14-00

(If H < 1° or if H > 89° see special rules)

X = Co-Lat + or - W:

Declination same name:	+ W	-W	- W	+ W
Declination contrary name:	- W	- W	-W	- W

D 20-00 N

(If declination is less than 1° see special rules)

H 14-00

Lat. – (90) ~~(89:60)~~ 34-00 N

Co-Lat. 56-00

W (+/-) + 20-33

~~(179:60)~~

X 76-33 (Ignore sign of X)

(If X < 90 then Y=X ; ~~If X > 90 then Y = 180-X~~)

Y 76-33 (Ignore sign of Y)

(If 1° >Y > 89° choose a different assumed latitude)

~~(180)~~ (179:60) ~~(360)~~ ~~(359:60)~~

Az -45-09

(If Az > 85° see special rules)

Zn 134-51

Hc 71-17

Ho _____

INT _____ T/A

Cos Co-Tan

Set 0 / Set H → Set D → Read W

Set W / Set Y → Set H → Read Az

Set Az / Set 0 → Set Y → Read Hc

Azimuth Rules

North Latitude

0 < LHA < 180 < LHA < 360

If DEC or W > LAT	Zn = 360 - Az	Zn = Az
If DEC contrary or W < LAT	Zn = 180 + Az	Zn = 180 - Az

South Latitude

If DEC or W > LAT	Zn = 180 + Az	Zn = 180 - Az
If DEC contrary or W < LAT	Zn = 360 - Az	Zn = Az