

COGO+ Tutorial

By [Simple Geospatial Solutions](#)

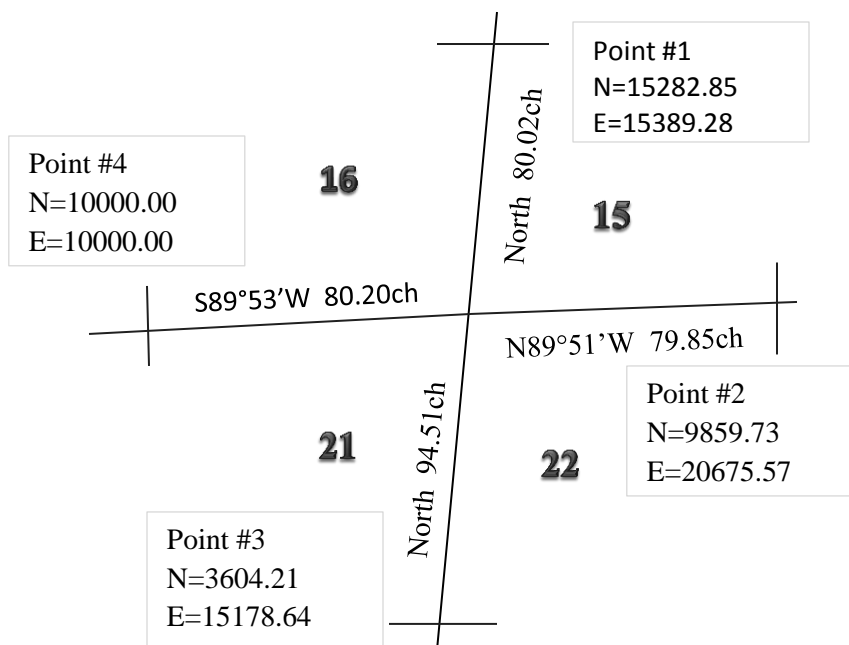
Purpose: Calculate the position of a lost corner as per the Double Proportion method (BLM).

Method: The Double Proportion program available in COGO+ Std and COGO+ Pro.

The Double Proportion program is one of the **Fit Points** options. A lost corner can be calculated with the double proportion method when coordinates for the four corners (north, east, south and west) are known.

Example 1

See sketch below for point coordinates and record dimensions.



Step 1: Ensure user settings are configured for quadrant bearings and Feet, and optionally set the user defined scale factor to 66.

```

CONFIGURE UNIT SETTINGS
Angle..... 360° ' "
Direc Ref.. Bearings
Distance... Feet
Foot Def... US Survey

Angle Unit
CHOOS  CANCL OK
  
```

```

CONFIGURE GENERAL SETTINGS
Descripts... Prompts On
Adjust Pts.. Re-Number
Pt Travers.. Standard
ASCII Ext... .TXT
Scl Factor.. 66.0000000000
Radius Tol.. 0.0100000000
User Defined Scale Factor
EDIT  CANCL OK
  
```

Step 2: Store the coordinates for Points 1-4.

```

STORE/EDIT POINTS
Pt #... 1
North.. 15282.850ft
East... 15389.280ft
Elev... 0.000ft
Desc... PT-NORTH

Point Number
EDIT LOW NEXT COPY CANCL STORE
  
```

```

STORE/EDIT POINTS
Pt #... 2
North.. 9859.730ft
East... 20675.570ft
Elev... 0.000ft
Desc... PT-EAST

Point Number
EDIT LOW NEXT COPY CANCL STORE
  
```

```

STORE/EDIT POINTS
Pt #... 3
North.. 3604.210ft
East... 15178.640ft
Elev... 0.000ft
Desc... PT-SOUTH

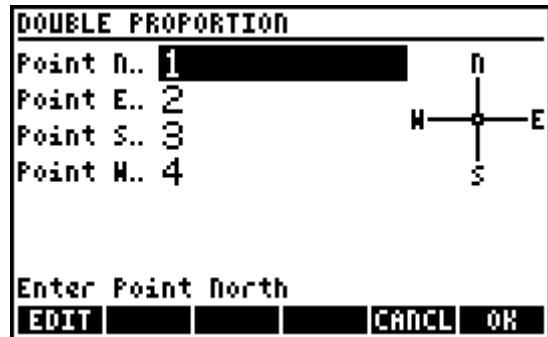
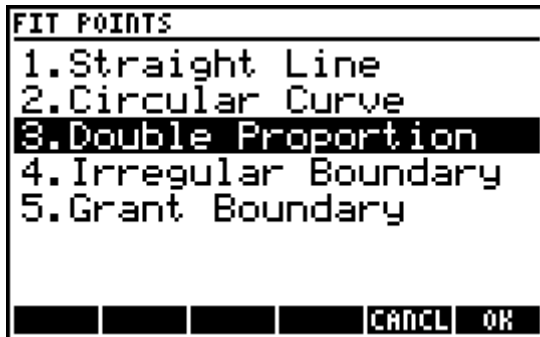
Point Number
EDIT LOW NEXT COPY CANCL STORE
  
```

```

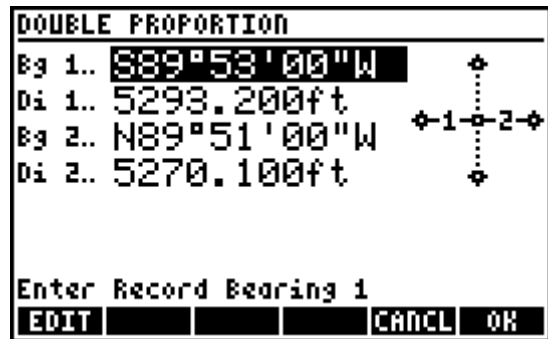
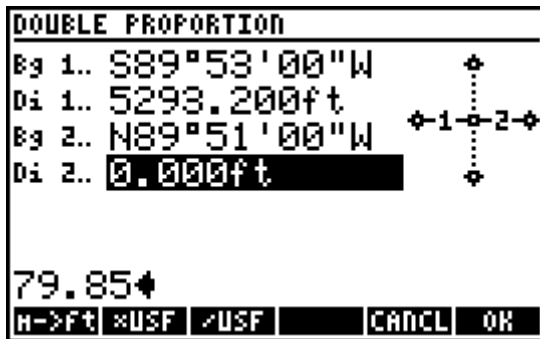
STORE/EDIT POINTS
Pt #... 4
North.. 10000.000ft
East... 10000.000ft
Elev... 0.000ft
Desc... PT-WEST

Point Number
EDIT LOW NEXT COPY CANCL STORE
  
```

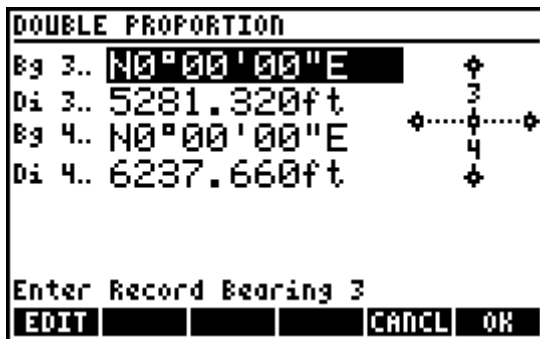
Step 3: Start the Double Proportion program, and enter the point numbers for the four known corners to the north, east, south, and west.



Step 4: Enter the record bearings and distances to the west and east. Note when entering the chain distances you can either use softkey **F2** **XUSF** or enter *Distance*66* for the distance.



Step 5: Enter the record bearings and distances to the north and south.



Step 6: Store the solution.

STORE POINT			
n: 9928.328ft			
E: 15349.461ft			
z: 0.000ft			
Point Number.....			
5			
LOW	NEXT	CANCL	OK