

Traverse Computation

Civil Engineering

Angles and distances into coordinates.

Close the angles first, then close the coordinates.

1

Check angular closure

Interior angles of a closed traverse sum to $(n - 2) \times 180^\circ$

2

Adjust the angles

Spread the angular misclosure equally between the stations.

3

Carry the bearings

Work the bearing forward through each adjusted angle.

4

Latitudes and departures

$\Delta N = L \cos \theta$ and $\Delta E = L \sin \theta$ for every leg in turn.

5

Check linear closure

Misclosure divided by total length gives the accuracy ratio.

6

Adjust the coordinates

Bowditch spreads the error in proportion to leg length.

Educational reference. Permitted misclosure is set by the survey specification for the class of work.