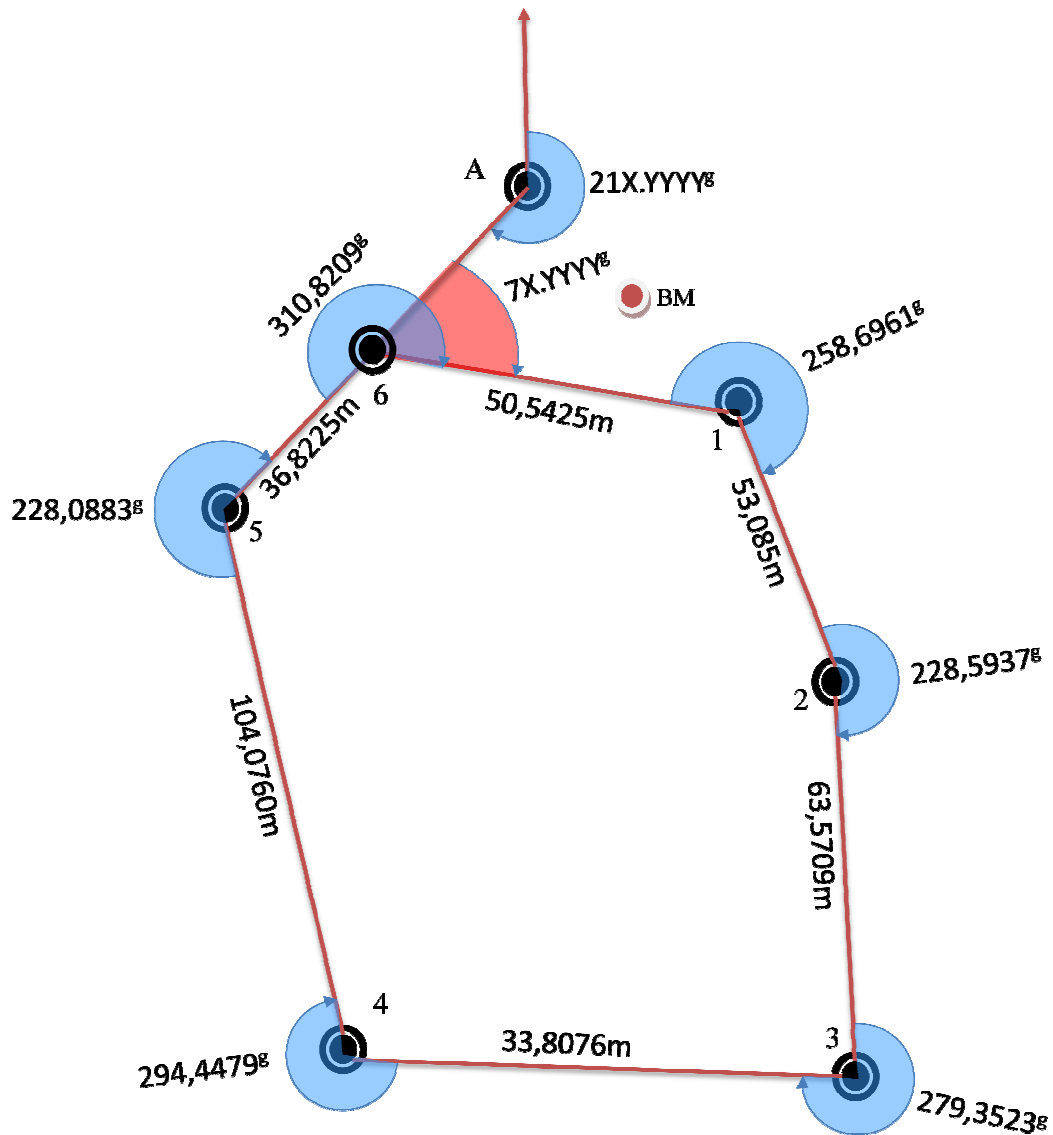


MIDDLE EAST TECHNICAL UNIVERSITY
CIVIL ENGINEERING DEPARTMENT
GEOMATICS DIVISION
CE 300 - 2010
Traverse Fieldwork



Note: Figure is not to scale

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Stations	Distances (m)
1-2	53,0850
2-3	63,5709
3-4	33,8076
4-5	104,0760
5-6	36,8225
6-1	50,5425

Stations	Bearings (°)
1	258,6961
2	228,5937
3	279,3523
4	294,4479
5	228,0883
6	310,8209

GROUP	A-6 (m)	$\alpha_{A6}(g)$	$\alpha_{A1}(g)$
1	1X,112	21X,0938	7X,0323
2	1X,234	21X,1788	7X,1864
3	1X,384	21X,2312	7X,3116
4	1X,465	21X,3546	7X,4318
5	1X,559	21X,9912	7X,9416
6	1X,613	21X,5347	7X,2845

***X values are going to be changed according to the section numbers.**

Coordinates of point A (X,Y) : (1000.000 m; 1500.000 m)

Elevation of BM: **916.000 m**

Do traverse computations according to your group. **Please state your A-6 , α_{A6} , and α_{A1} values in your report.**

- ADJUST EXTERIOR ANGLES OF TRAVERSE,
 - COMPUTE I.A, E.A., BETA,
 - COMPUTE AZIMUTHS OF ALL STATIONS,
 - COMPUTE ACCURACY OF TRAVERSE AND ADJUST ΔX & ΔY ,
 - COMPUTE COORDINATES OF ALL STATIONS (in mm precision),
 - COMPUTE AND ADJUST ELEVATIONS OF ALL STATIONS USING YOUR OWN DATA (Vertical Distance data that you have measured during Traverse Fieldwork), GIVE WEIGHT TO MEASUREMENTS WHILE ADJUSTING THE ELEVATION.
 - PUT ALL DATA OF TRAVERSE IN A TABLE,
 - (Put X,Y & North directions and scale on the figure!)
-
- The correction to the angles may be more than 4 significant figures. First compute the correction amount and add then round the corrected angle. If the condition can not be satisfied, then adjust some of the angles.
 - By using the azimuth A6 and connection angle given for station 6 compute the azimuth 61 and then compute the remaining station points' azimuths. There is a check at final computation. Do not forget to do it.
 - **Compute the accuracy of traverse in mm and fraction form.** Then adjust the horizontal coordinates of the traverse by giving weight to measurements. (see the summer practice guide)
 - Adjust the elevation measurements as following;
First compute the correction by giving weight by the cumulative horizontal distance and then add the correction and round the corrected measurement. Do the check after adjusting the measurements.
 - Make the traverse table (see the summer practice guide but additionally add Elevation also)
 - Do not cheat. Improper collaboration will strictly be punished