Surveying - Traverse

Group Problem 6

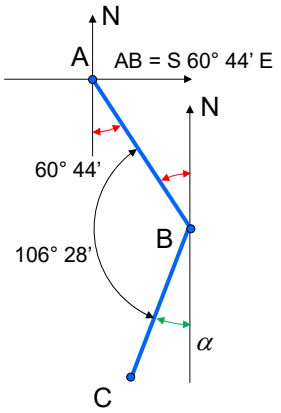
- A four-sided closed field traverse has the following distances in feet: AB = 508.10, BC = 500.93, CD = 635.94, and DA = 377.57.
- The interior angles are as follows: A = 86º 34', B = 106º 28', C = 64º 06', and D = 102º 52'. The bearing of AB is S 60º 44' E.
- The bearing of AB is S 60º 44' E.

1

Surveying - Traverse

Group Problem 6

Find the bearing of side BC:



α = 179° 60'
- 60° 44'
- 106° 28'
12° 48'

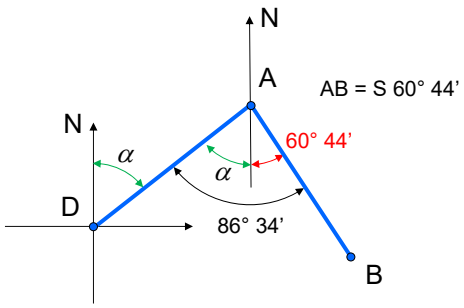
BC = S 12° 48' E

2

Surveying - Traverse

Group Problem 6

Find the bearing of side DA:



α = 85° 94’
- 60° 44’
25° 50’

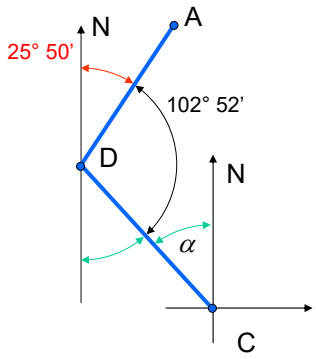
DA = N 25° 50’ E

3

Surveying - Traverse

Group Problem 6

Find the bearing of side CD:



α = 178° 120’
- 25° 50’
-102° 52’
51° 18’

CD = N 51° 18’ W

4

Surveying - Traverse

Group Problem 6

Side	Bearing				Length (ft)	Latitude	Departure	Corrections		Balanced	
		degree	minutes					Latitude	Departure	Latitude	Departure
AB	S	60	43	E	508.10	-248.53	443.17	-0.122	0.144	-248.648	443.315
BC	S	12	48	W	500.93	-488.48	-110.98	-0.120	0.142	-488.602	-110.838
CD	N	51	18	W	635.94	397.62	-496.31	-0.152	0.180	397.464	-496.127
DA	N	25	50	E	377.57	339.84	164.53	-0.090	0.107	339.747	164.635
					2022.54	0.45	0.41			-0.038	0.984

$E_{closure}$ = 0.607 ft

Precision = $\frac{1}{3{,}331}$

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Surveying - Traverse

Group Problem 6

Questions?

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