Surveying - Traverse

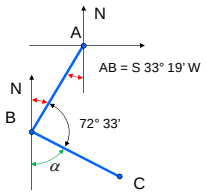
Homework 10

- A four-sided closed field traverse has the following distances in feet: AB = 636.45; BC = 654.49; CD = 382.85; and DA = 512.77.
- The interior angles are as follows (measured as angles to the right): A = 81º 23'; B = 72º 33'; C = 89º 40'; and D = 116º 24'.
- The bearing of AB is S 33º 19' W and the side BC is in the SE quadrant.

Surveying - Traverse

Homework 10

Find the bearing of side BC:



α = 179° 60'
- 72° 33'
- 33° 19'

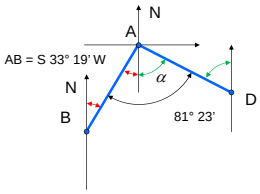
74° 08'

BC = S 74° 08' E

Surveying - Traverse

Homework 10

Find the bearing of side DA:



α = 81° 23'
- 33° 19'

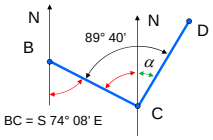
48° 04'

DA = N 48° 04' W

Surveying - Traverse

Homework 10

Find the bearing of side CD:



α = 89° 40'
- 74° 08'

15° 32'

CD = N 15° 32' E

Surveying - Traverse

Homework 10

Side	Bearing				Length (ft)	Latitude	Departure	Corrections		Balanced	
		degree	minutes					Latitude	Departure	Latitude	Departure
AB	S	33	19	W	636.45	-531.848	-349.580	-0.218	-0.303	-532.066	-349.883
BC	S	74	8	E	654.49	-178.937	629.554	-0.224	-0.311	-179.161	629.243
CD	N	15	32	E	382.85	368.866	102.527	-0.131	-0.182	368.735	102.345
DA	N	48	4	W	512.77	342.666	-381.461	-0.175	-0.244	342.491	-381.705
					2186.56	0.748	1.039			0.000	0.000

$E_{closure}$ = 1.280 ft

Precision = 1 / 1,708

Surveying - Traverse

Homework 10

Questions?