

Sheet #3

Note: You are required to submit the answers in a report within one week (hand writing)

1. Determine the horizontal angle for the following observations:

Occ. Point	Target point	Left hand face			Right hand face			Av.	Angle
O	A	00	00	00	179	59	20
	B	110	59	40	291	00	40

2. A theodolite with two venires is used to measure a horizontal angle, the table below shows the recorded observations. Use these data to determine the horizontal angle.

Inst. at	Sighted to	Left hand face		Right hand face		Average	Average			
		A	B	A	B					
A		0	"	0	"	"	0			
	1	00	01	40	180	01	00	00	01	20
	3	55	12	20	235	12	20	55	12	00

3. A theodolite with two venires is used to measure a horizontal angle, the table below shows the recorded observations. Use these data to determine the horizontal angle.

Inst. at	Sighted to	Left hand face		Right hand face		Average	Average						
		A	B	A	B								
A		0	"	0	"	"	0						
	1	00	01	20	180	01	00	180	01	20	00	01	40
	3	73	42	20	225	42	40	253	42	40	73	42	20

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4. Calculate the value of the vertical angle at point B.

Occ. Point	Target point	Left hand face Vl.	Right hand face Vl.	Av.	Remark
O	B	96 23 30	265 36 10

5. Convert the following quadrennial bearings into whole circle bearing and find their back bearings: S78 W, N 45 W, S 43 E and N 52 E.

Good Luck