Rut Sharma
106030
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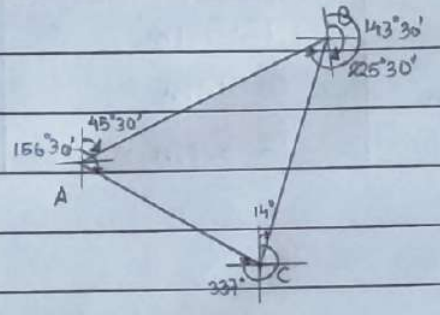
EXPERIMENT-10.

MEASUREMENT OF BEARINGS USING PRISMATIC COMPASS.

Q/. The following are bearings taken on closed compass traverse. Compute the included angles and correct them for observation errors. Determine the correct bearings of the lines.

Line	Fore Bearing	Back Bearing.
AB	45° 30'	225° 30'
BC	193° 30'	14°
CA	337°	156° 30'

Sol:-



Included angles:

$\angle A$ = BB of CA - FB of AB
= 156° 30' - 45° 30'
= 111°

$\angle B$ = BB of AB - FB of BC
= 225° 30' - 193° 30'
= 32°

$\angle C$ = 360° - FB of CA + BB of BC
= 360° - 337° + 14°
= 37°

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Line	FB	BB.	Included Angle	correc	corrected Inel angle	Diff	corrected BB	corrected FB	Rem
AB	45°30'	225°30'	∠A = 111°	-	∠A = 111°	180°	225°30'	45°30'	free & local
BC	193°30'	14°	∠B = 32°	-	∠B = 32°	179°30'	13°30'	193°30'	
CA	337°	156°30'	∠C = 37°	-	∠C = 37°	336°30'	156°30'	336°30'	

$\Sigma = 180°$

n = no. of sticks.

Sum of Included Angles = $(2n-4) \times 90°$

$= 2 \times 90°$

$= 180°$

FB of AB = 45°30' → correct

BB of AB = 225°30' → correct

FB of BC = 193°30' → correct

BB of BC = FB of BC − 180°

= 193°30' − 180°

= 13°30'

BB of CA = 156°30' → correct.

FB of CA = 156°30' + 180°

336°30'