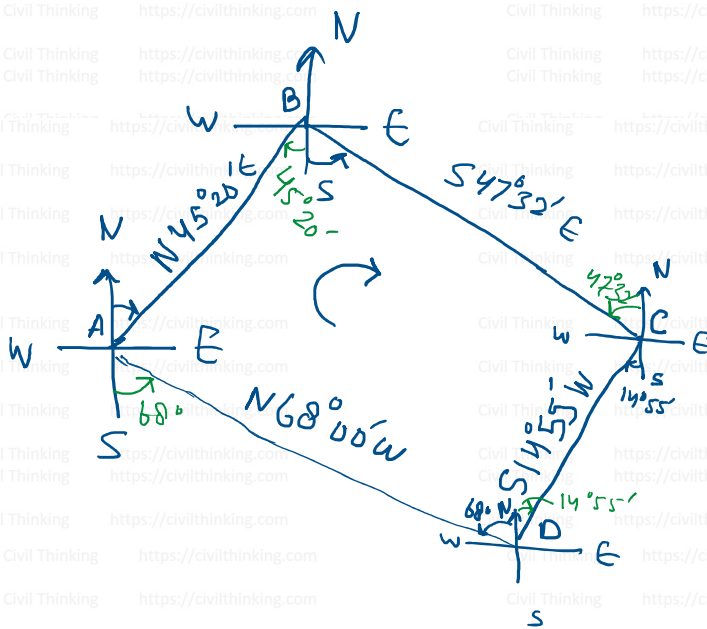


Closed traverse ABCD has the following bearings AB equals North 45 degrees 20 minutes East BC equals South 47 degrees 32 minutes East CD equals South 14 degrees 55 minutes West and DA equals North 68 degrees 00 minutes West Compute the interior angles and provide a geometric check for your work

4.7 Closed traverse ABCD has the following bearings: $AB = N 45^{\circ} 20' E$; $BC = S 47^{\circ} 32' E$; $CD = S 14^{\circ} 55' W$; $DA = N 68^{\circ} 00' W$.

Compute the interior angles and provide a geometric check for your work.

Solution:



From Above figure

$$\angle A = (180^{\circ} - 68^{\circ}) - 45^{\circ} 20' = 112^{\circ} - 45^{\circ} 20' = 112^{\circ} 00' - 45^{\circ} 20'$$

$$\underline{\underline{66^{\circ} 40' L}}$$

$$\angle B = 45^\circ 20' + 47^\circ 32' = 45^\circ 20' + 47^\circ 32' = 92^\circ 52'$$

$$\angle C = (180^\circ - 14^\circ 55') - 47^\circ 32' = 180^\circ 00' - 14^\circ 55' - 47^\circ 32' = 117^\circ 33'$$

$$\angle D = 68^\circ + 14^\circ 55' = 82^\circ 55'$$

Geometric check: $\sum \text{interior Angle} = \angle A + \angle B + \angle C + \angle D =$

$$\begin{aligned} &66^\circ 40' \\ &+ 92^\circ 52' \\ &+ 117^\circ 33' \\ &+ 82^\circ 55' \\ &\hline &360^\circ 00' \end{aligned} \quad \text{Check o.k.}$$

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