

COURSE 4 Web Problem Mean Bearing and Linear Convergency

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Sorry. This statement is FALSE. The mean bearing is N. 84° 49' 07" W. This bearing is calculated as follows:

1-Determine the forward bearing at Pt-4.

$$180^\circ 19' 19'' - 85^\circ 06' 14'' - 180^\circ = \text{N. } 84^\circ 46' 55'' \text{ W.}$$

2-Determine the departure of the course.

$$\sin 84^\circ 46' 55'' \times 362.427 \text{ chs.} = 360.925 \text{ chs.}$$

3-Determine the correction for curvature for this course.

$$360.925 \text{ chs. (the departure of this course)} \times 0.000203125^\circ \text{ (correction per chain)} = 0^\circ 04' 24''$$

4-Determine the back bearing of this course at AP-3.

$$\text{S. } 84^\circ 46' 55'' \text{ E. (forward bearing at Pt-4)} - 0^\circ 04' 24'' \text{ (correction for curvature)} = \text{N. } 84^\circ 51' 19'' \text{ W.}$$

5-Calculate the mean bearing.

$$84^\circ 46' 55'' \text{ (forward bearing)} + 84^\circ 51' 19'' \text{ (back bearing)} \div 2 = \text{N. } 84^\circ 49' 07'' \text{ W.}$$

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Sorry. This statement is TRUE. The mean bearing is S. 26° 07' 40" W and is calculated as follows:

1-Determine the forward bearing at AP-5

$$68^\circ 11' 42'' + 85^\circ 40' 56'' - 180^\circ = \text{N. } 26^\circ 07' 22'' \text{ W.}$$

2-Determine the departure of the course.

$$\sin 26^\circ 07' 22'' \times 110.866 \text{ chs.} = 48.814 \text{ chs.}$$

3-Determine the correction for curvature for this course.

$$48.814 \text{ chs. (the departure of this course)} \times 0.000203125^\circ \text{ (correction per chain)} = 0^\circ 00' 36''$$

4-Determine the back bearing of this course at Pt-9.

$$\text{N. } 26^\circ 07' 22'' \text{ W. (forward bearing at AP-5)} + 0^\circ 00' 36'' \text{ (correction for curvature)} = \text{N. } 26^\circ 07' 58'' \text{ W.}$$

5-Calculate the mean bearing.

$$26^\circ 07' 22'' \text{ (forward bearing)} + 26^\circ 07' 58'' \text{ (back bearing)} \div 2 = \text{N. } 26^\circ 07' 40'' \text{ W.}$$

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Sorry. This statement is TRUE. The mean bearing is S. 16° 28' 49" W and is calculated as follows:

1-Determine the forward bearing at Pt-9.

$$222^{\circ} 36' 42'' - 26^{\circ} 07' 58'' - 180^{\circ} = \text{N. } 16^{\circ} 28' 44'' \text{ E.}$$

2-Determine the departure of the course.

$$\sin 16^{\circ} 28' 44'' \times 44.716 \text{ chs.} = 12.684 \text{ chs.}$$

3-Determine the correction for curvature for this course.

$$12.684 \text{ chs. (the departure of this course)} \times 0.000203125^{\circ} \text{ (correction per chain)} = 0^{\circ} 00' 09''$$

4-Determine the back bearing of this course at AP-1.

$$\text{N. } 16^{\circ} 28' 44'' \text{ E. (forward bearing at Pt-9)} + 0^{\circ} 00' 09'' \text{ (correction for curvature)} = \text{N. } 16^{\circ} 28' 53'' \text{ E.}$$

5-Calculate the mean bearing.

$$16^{\circ} 28' 44'' \text{ (forward bearing)} + 16^{\circ} 28' 53'' \text{ (back bearing)} \div 2 = \text{S. } 16^{\circ} 28' 49'' \text{ W.}$$