Solutions to Distance and Angle Measurement Problems

Civil Engineering Licensure Exam – Mock Exam (Day 9)

February 25, 2025

Solutions

1. A bearing of N45°E is equivalent to which azimuth angle?
   Solution: How to Convert Bearings to Azimuth and Azimuth to Bearing
2. The azimuth angle of S60°E is:
   Solution: How to Convert Bearings to Azimuth and Azimuth to Bearing
3. Convert an azimuth of 270° to a bearing.
   Solution: How to Convert Bearings to Azimuth and Azimuth to Bearing
4. A line has a back azimuth of 200°. What is its forward azimuth?
   Solution: How to Convert Bearings to Azimuth and Azimuth to Bearing
5. What is the sum of the interior angles in a closed traverse with 5 sides?
   Solution: Finding Bearings and Azimuths for Traverse
6. Compute the azimuth angle of a line with a bearing of S35°W.
   Solution: How to Convert Bearings to Azimuth and Azimuth to Bearing
7. Convert an azimuth of 210° into its corresponding bearing.
   Solution: How to Convert Bearings to Azimuth and Azimuth to Bearing
8. A survey line has an azimuth of 75°. Compute the back azimuth.
   Solution: How to Convert Bearings to Azimuth and Azimuth to Bearing
9. A closed traverse has 4 interior angles of 85°, 95°, 100°, and 110°. Find the missing angle.
   Solution: Finding Bearings and Azimuths for Traverse
10. A line of known azimuth 125° is rotated clockwise by 40°. Determine the new azimuth.
    Solution: How to Convert Bearings to Azimuth and Azimuth to Bearing