Solutions to Surveying Problems

Civil Engineering Licensure Exam – Mock Exam (Day 10)

February 25, 2025

Solutions

1. **Problem:** Calculate the reduced levels of points using the rise and fall method.

   Solution: Rise and Fall Method in Levelling — Surveying — Animated Video

2. **Problem:** Determine the area under a curve using the trapezoidal rule.

   Solution: Trapezoidal Rule - YouTube

3. **Problem:** Explain the height of instrument method in leveling.

   Solution: Taking Levels - Rise and Fall Level Book - YouTube

4. **Problem:** Apply the trapezoidal rule to approximate the integral of a function.

   Solution: A Step-by-Step Guide to the Trapezoidal Rule for Area Approximation

5. **Problem:** Discuss the differences between the rise and fall method and the height of instrument method.

   Solution: Rise and Fall Method in Levelling - Surveying - YouTube

6. **Problem:** Calculate the area under a curve using the trapezoidal rule with given data points.

   Solution: Trapezoidal Rule - YouTube

7. **Problem:** Describe the process of booking and reducing levels in surveying.

   Solution: Taking Levels - Rise and Fall Level Book - YouTube

8. **Problem:** Use the trapezoidal rule to estimate the area under a curve represented by a set of discrete data points.

   Solution: A Step-by-Step Guide to the Trapezoidal Rule for Area Approximation

9. **Problem:** Explain the procedure for leveling using the rise and fall method.

   Solution: Rise and Fall Method in Levelling - Surveying - YouTube

10. **Problem:** Calculate the area under a curve using the trapezoidal rule and compare it with Simpson's rule.

    Solution: Trapezoidal Rule - YouTube