

**Objective**

The purpose of this assignment is twofold. First, you will have an opportunity to practice your skills in developing a contour map from data recorded from a differential leveling survey; and second, you will get a chance to practice your skills in developing simple engineering spreadsheets for surveying applications.

You must hand in the **coversheet** for the assignment, your calculation for Part 1, and printouts of Parts 2-3. Also, submit your Excel file for Part 2 and your Word file for Part 3 to the Dropbox in Canvas.

**Problems**

**Part 1.** Table 1 lists the elevations (in feet) at the corners of each 50-ft square grid cell. Develop a contour map for the two left-most cells in the top row of the grid elevation data. For these two cells, draw 2-ft interval contours using a scale of 1 inch = 25 feet. Remember to follow the homework format; however, you may use a different type and size of paper to present your contour map if you desire. Identify your solution methodology and discuss its strengths and weaknesses. If you have any questions, please contact Dr. Camp.

Table 1. Elevation data for a 50' x 50' grid.

	A	B	C	D	E
1	64.8	67.1	69.3	71.2	67.4
2	66.8	69.1	70.9	71.5	69.2
3	67.2	70.7	71.1	72.8	69.7
4	63.3	66.5	68.1	68.2	66.6

**Part 2.** Use the graphing capabilities of Excel to develop a contour map from the data listed in Table 1. Include a North arrow and contour line labels on your plot. Hand in a printout of your spreadsheet containing the graph and submit your spreadsheet via eCourseware.

**Part 3.** Use WORD or other word processing software to prepare a title page and a Table of Contents for the Project #1 Report. To develop a sample table of contents, use the heading structure defined in the content evaluation criteria and assume page numbers for each section. See the report guidelines for details on the report format.

**Part 4.** Read the Preface and Chapter 1 in the *Strategies for Creative Problem Solving* by Fogler and LeBlanc.