The Grid Problem - README

# Provided Observations/Assumptions

* Points form a grid in 2D space.
* Input points are in no particular order.
* The **grid is square** – there are the **same number of rows as columns**.
* The grid is fully populated – **there are no missing points**.
* The distance between two neighboring points in the same row or column is constant.
* Columns and Rows may or may not be aligned with the x and y axes.
* The number of columns and rows are arbitrary.

# Notes

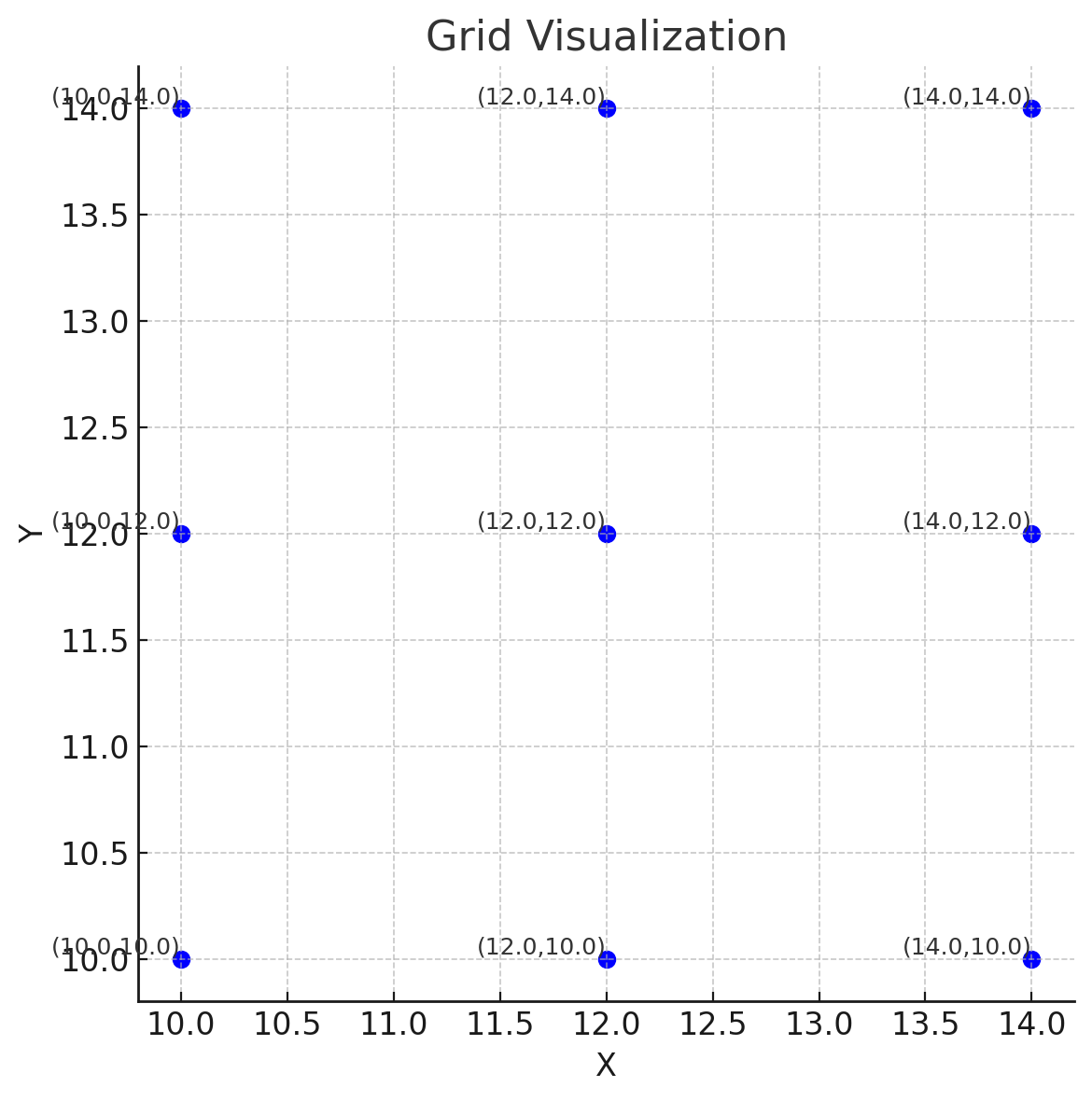
* MVC architecture style loosely applied for separation of concern.
  + GridController
  + GridView
  + GridModel
  + DAL
  + Etc.
* Error/Exception Handling implemented to handle areas such as input file issues (existence, format/coordinate validity, etc.).
* Test files used (and included in project files) to examine conditions in the four quadrants of the 2D space with various grid sizes and degrees. See “Test Data” below for data file names and visualization of the plotted coordinates.
* The coordinate type is set as double, so the X/Y values are large:
  + **Min value:** -1.7976931348623157E+308
  + **Max value:** +1.7976931348623157E+308

# GitHub Project Location

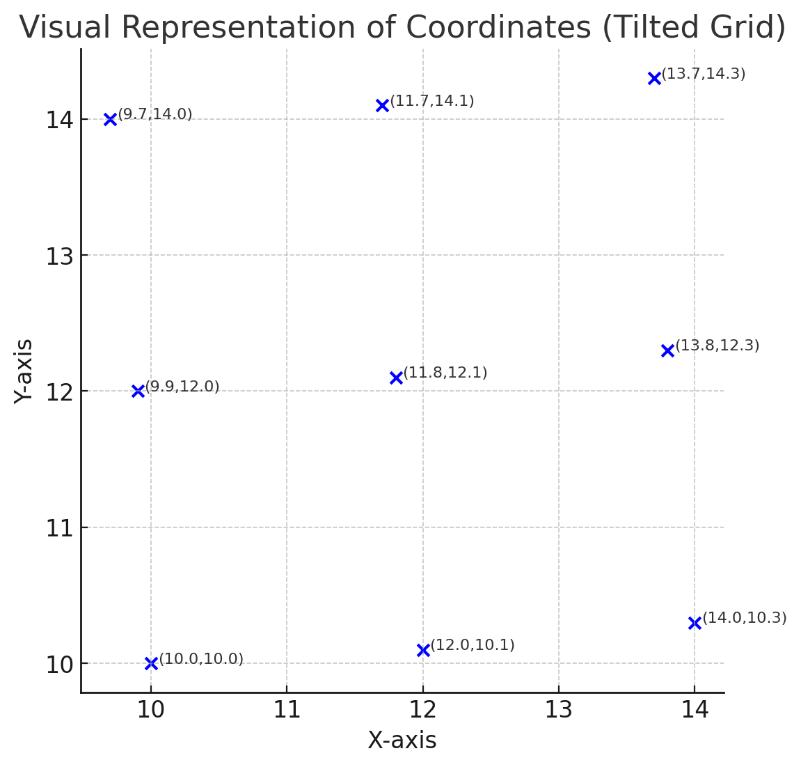
https://github.com/revanko/TheGridProblem

# Test Data

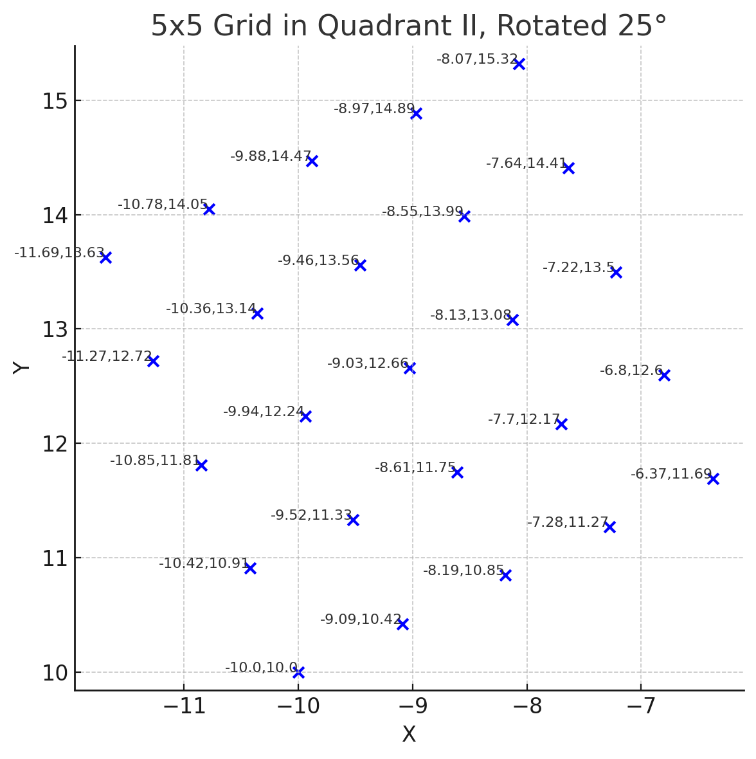
grid\_example.txt



grid\_input.txt



grid\_5x5\_25deg\_quadrant\_II.txt

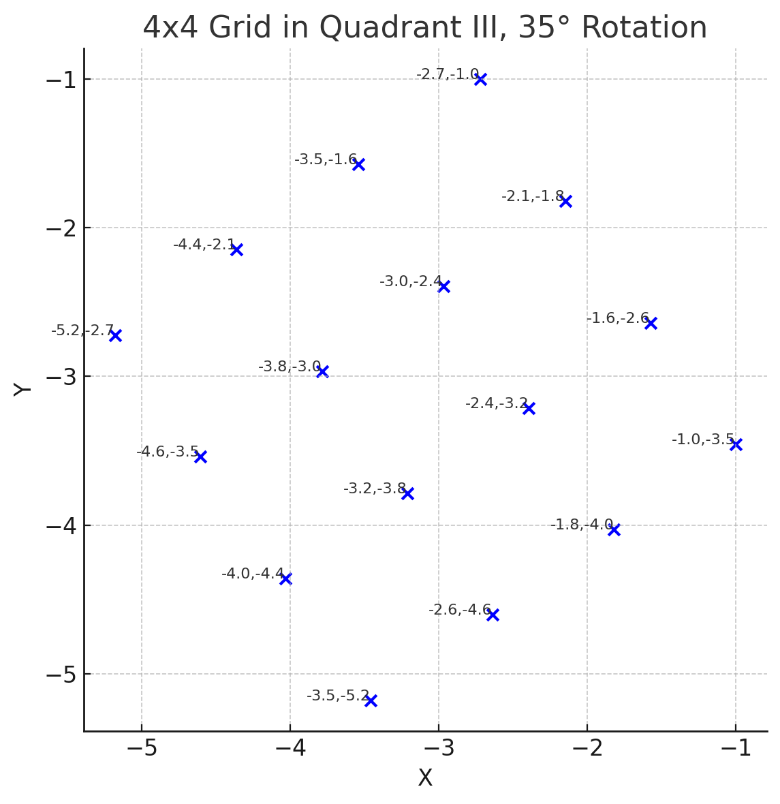


grid\_5x5\_neg25deg\_quadrant\_II

A graph with numbers and symbols

AI-generated content may be incorrect.

grid\_4x4\_35deg\_quadrant\_III

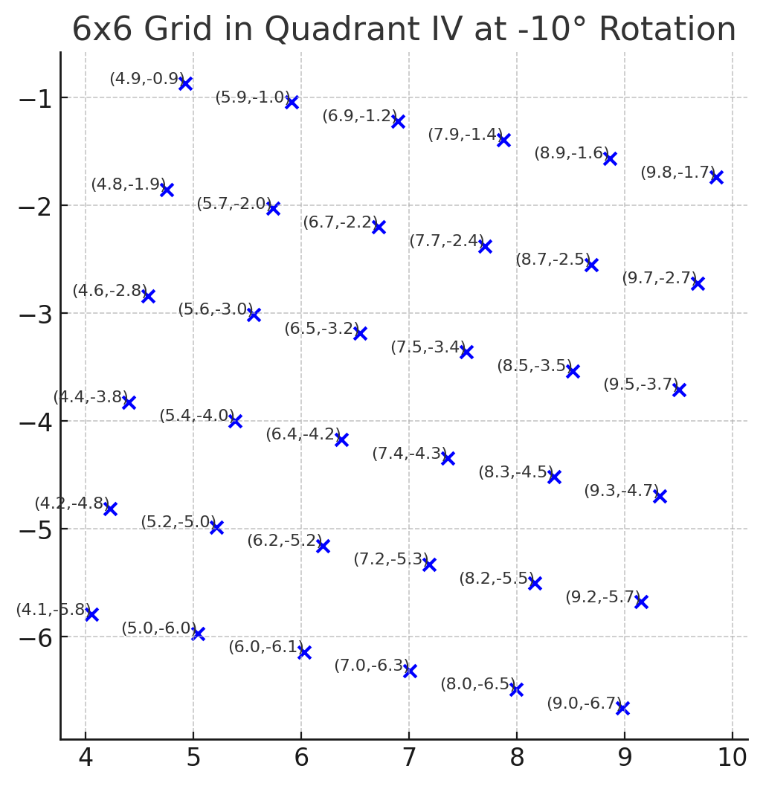


grid\_4x4\_quadrant\_III

A grid with numbers and symbols

AI-generated content may be incorrect.

grid\_6x6\_neg10deg\_quadrant\_IV



grid\_6x6\_10deg\_quadrant\_IV

A graph of a square grid

AI-generated content may be incorrect.