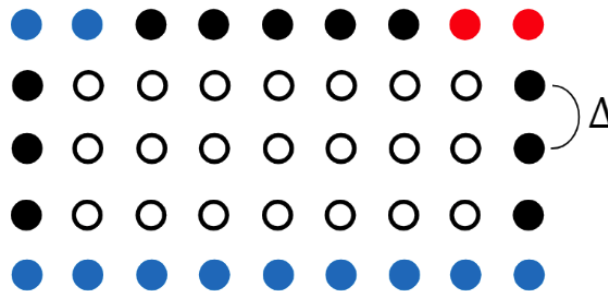


2D Laplace equation

20171058 주휘인

Introduction

We solve Laplace equation in 2D space. We first assign index to all position and make Laplace equation solver with those indices. We considered the case where



Blue circles represent 0 boundary condition, reds represent unity boundary condition and blacks represent Neumann boundary condition.

Result

We consider four case where

1. red circles are located in the original position
2. Unity boundary are located in the top/left position
3. Unity boundary are located in the bottom position
4. Function is unity at all three points

The results are the followings

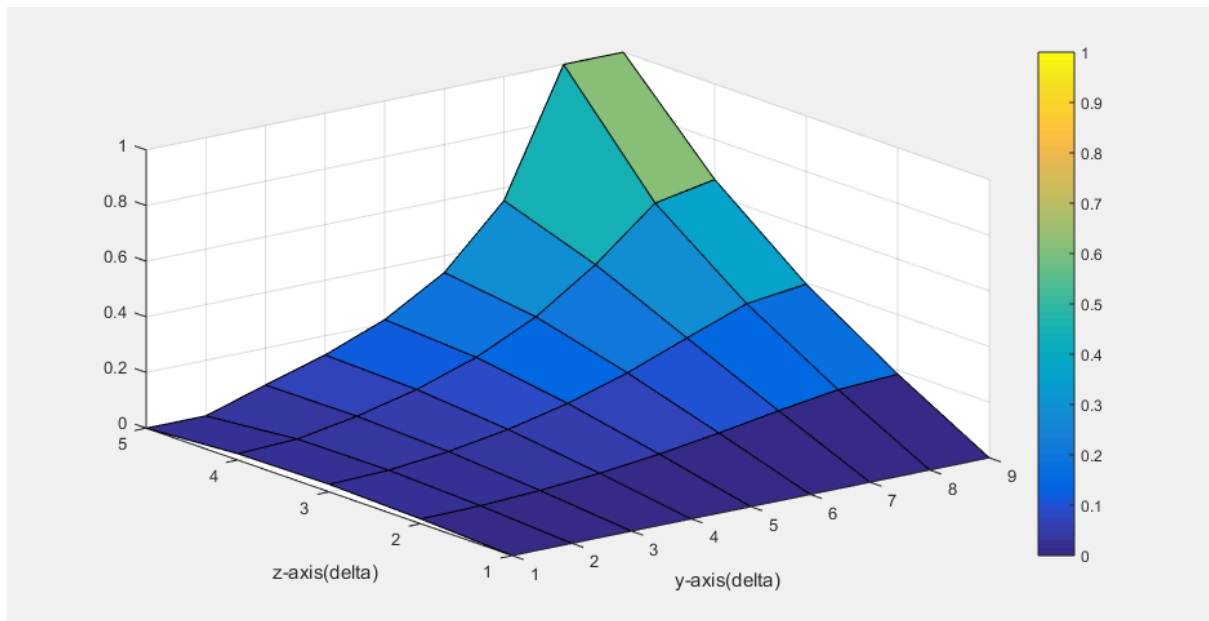


Fig. 1 Unity boundary are located in the top/right position (Case 1)

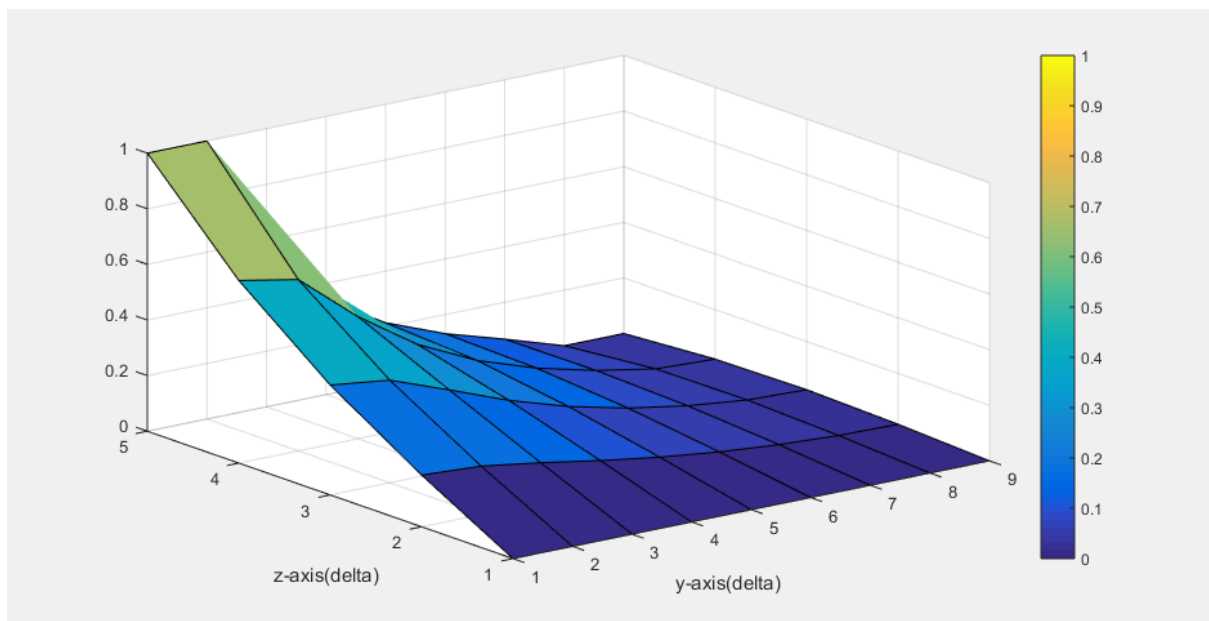


Fig. 2 Unity boundary are located in the top/left position (Case 2)

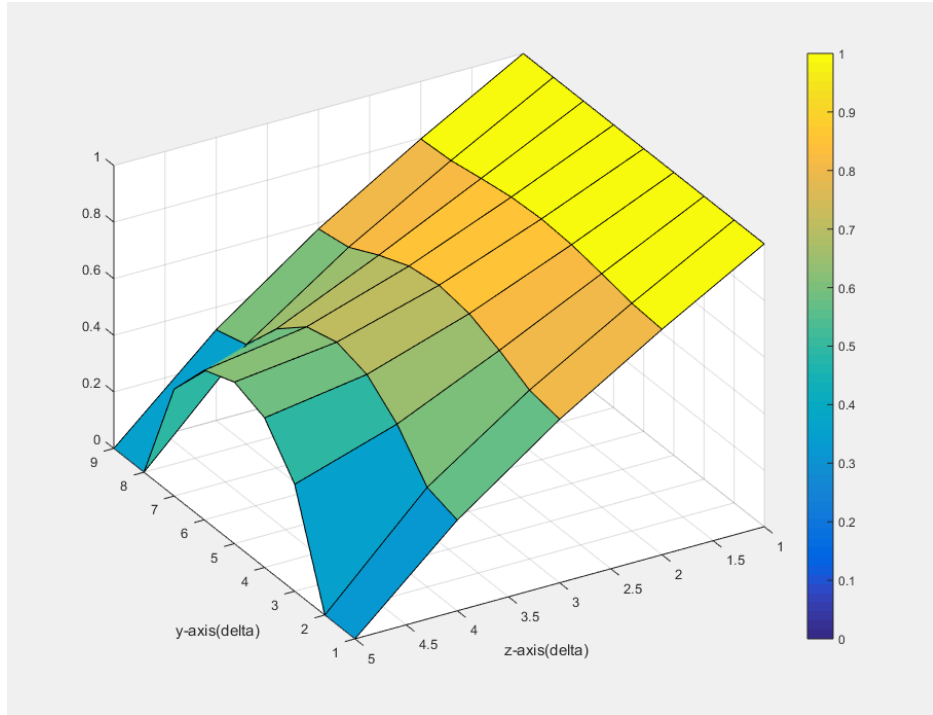


Fig. 3 Unity boundary are located in the bottom position (Case 3)

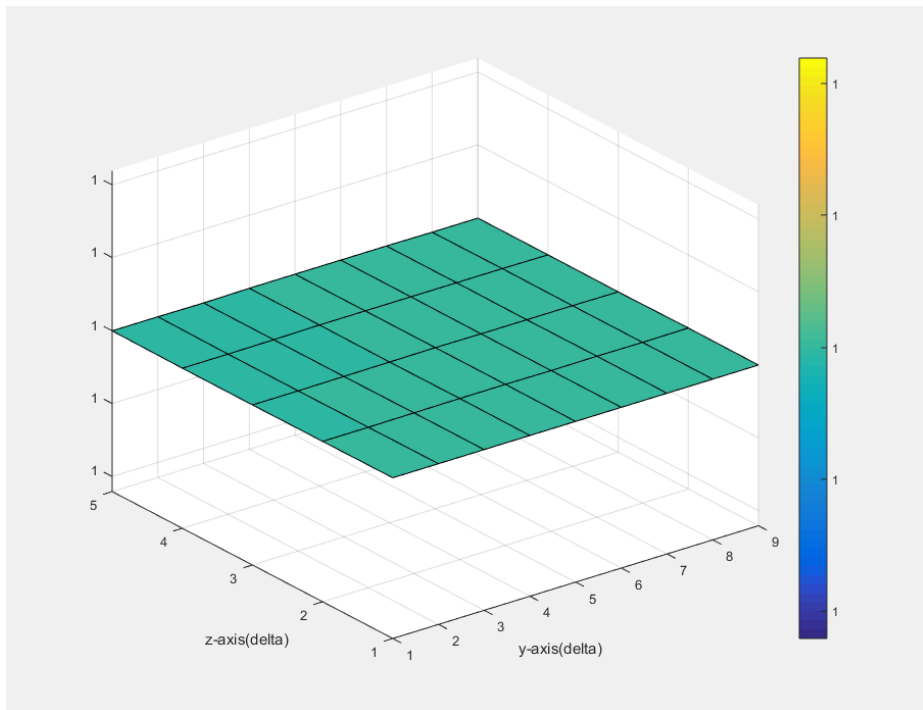


Fig. 4 Function is unity at all three points (Case 4)

These results seem very much reasonable because trend of the figure follows the boundary condition.