Game of Life (2D) Rules:

1. The neighbours of a given cell are the eight cells that touch it vertically, horizontally, or diagonally

2. If a cell is alive but either has no neighbouring cells alive or only one alive, then in the next generation the cell dies of loneliness

3. If a cell is alive and has four or more neighbouring cells also alive, then in the next generation the cell dies of overcrowding.

4. A living cell with either two or three living neighbours remains alive in the next generation.

5. If a cell is dead, then in the next generation it will become alive if it has exactly three neighbouring cells, no more or fewer, that are already alive. All other dead cells remain dead in the next generation.

6. All births and deaths take place at exactly the same time, so that dying cells can help to give birth to another, but cannot prevent the death of others by reducing overcrowding, nor can cells being born eigher preserve or kill cells living in the previous generation.

Game of life (1D) Rules:

1. Each cell has four neighbouring positions: those at distance one or two from each side.

2. A dead cell with either two or three living neighbours will become alive in the next generation.

3. A living cell dies if it has zero, one or three living neighbours.

4. A dead cell with zero, one or four living neighbours stays dead.

5. A living cell with two or four living neighbours stays alive.