Day 11: Chronal Charge

Friday, December 14, 2018 9:00 PM

Given

300x300 Grid of fuel cells and their current power levels (can be negative)
Each fuel cell has a coordinate ranging from 1 to 300 in both x and y directions
- In coordinate system top-left is 1,1 and top right is 300,1

Determine

The 3x3 square that has the largest total power. This will be determined by the form x,y; where x,y is the top-left fuel cell.

Power Level

Determined by
- ((RackID) * y + (serial number))*(RackID) -> Only keep hundreds digit - 5
- RackID -> x + 10
- Serial Number -> Puzzle Input

$((x+10)y + 5)x$

$x^2y + 10xy + 5x$

$x^2y + 5x(2y+1)$

FuelCell
private:
int powerLevel
public:
FuelCell(x, y, SerialNumber)
int getPowerLevel

PowerGrid
private height; Private FuelCell[][] cells;
private width;
public PowerGrid(int width, int height, int Seial number)
public getTopLeftofMaxPowerArea()

Brute Force Solution

Look at a 3x3 grid, and iterate right and left.

Store the top left corner of max section and also the max value