Let's talk about how the water will be poured. If the water is poured from only one point, let's say middle of the chessboard. If that's the case, then the water may never reach on some of the edges and on some layouts, "once water runs over from every side of it?" this part of the question may never be satisfied as there may be a dam-like layout on an edge where water can't go past it so for the answer of this question, I'm assuming that the water will be poured in a way that the chessboard will be filled as in even a single drop on any cell will cause that much water spilling from the board. Note that the problem mentioned above may occur on different layouts for example if the shortest block on an edge is higher than another edge's shortest block than the water won't spill from there.

Considering the problem mentioned above and the way we pour the water, on a simple layout without any dam-like or channel-like patterns, all we need to find is a base level which is the height of water where it's spilling from and anything above that level would be what remains of the board. It can be calculated in a loop by subtracting that height of water level from every cell's height and results that are less than or equal to 0 means they're underwater, and the all the results that are greater than 0 is what's remaining.

Now the idea of subtracting every cell's height from the water level and the positive results are what's left should work for most cases but it's tricky to generalize it as there are cases where a set of cell blocks could create a dam or a water channel or boxes. These cases require different methods. If there's a dam-like set of blocks for example, the dam would hold water as high as the shortest block on the dam and the edge's height may be lower than that block but the water level until that dam will be higher.

In order to generalize it, we need all the areas that have different water level, the cells that are inside those areas and that the height of the water. After that, we can find all the remaining cells on those areas by subtracting height of water level to those specific areas from each cell inside those areas, the positive results would give us the remaining of the chessboard. Note that there will be intersecting cells which means there will be multiple results for some of the cells and the lowest results for those cells should be considered as remaining for those cells.