**This is my thought process on pa4 (read disclaimer)**

***Disclaimer****: I used this method and got 3/8, but this is a very good foundation to start from. Use this and your knowledge to find out how to get the other 5 missing points*

**How to find out the best possible outcome**

Start with your board

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

This is how you will find your base case. When u start at the very first row you’re only gonna check two different scenarios:

Case 1: Even number indexes (90, 62, 69) and the following row

Case 2: Odd number indexes (35, 54, 62) and the following row

You want to check the total of the first and second rows for both cases while following the rules, so…

Case 1)

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

90 + 62 + 69 + 89 + 59 + 76 = 445

Case 2)

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

35 + 54 + 62 + 17 + 13 + 24 = 143

Compare the results and you will find the best base case

445 > 143

Only store the first row as the best possible case for reasons coming up

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

This is your board so far

Continuing with your newfound board…

After u find the best case of the first row, find the best case for the next row (the number of outcomes is fixed (to a certain number but I’m not sure of it yet)). Keep in mind that diagonals can coexist in one reality (will explain this further down), so they must be accounted for together

Green: possible outcomes being checked

Blue: row currently selected

89 + 59 + 76 = 224

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

73 + 57 + 60 = 190

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

1 + 11 + 34 = 46

Max(224 + 46, 190) = 224 + 46 = 270

**The reason why we add the values from the second row and the third row corresponding with 1+11+34 and 89 + 59 + 76 is because when you have this layout:**

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

**89, 59, 76 cannot coexist with 73, 57, 60 because if they did, you’re breaking the rules. HOWEVER, 89, 59, 76 can coexist with 1, 11, 6 can coexist in the same universe (same universe as in the ruleset we must deal with) so they have to be accounted for together. If 73 + 57 + 60 was greater than 89 + 59 + 76 + 1 + 11 + 34 then the next best case would be 73 + 57 + 60 but that’s not the case (we will see this happen later)**

We care about the row that totals to 224 which is then stored as the best possible outcome so far

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

Repeat the process with the next row

1 + 11 + 34 = 46

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

52 + 21 + 9 = 82

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

94 + 67 + 77 = 238

Max(46 + 82, 238) = 238

So we end up with this:

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

The row that totals to 238 is stored as the best possible outcome (because its greater than if we chose 1, 11, 34 and if we did chose that option we would have no choice but to choose 52, 21, 9)

35 90 54 62 62 69

89 17 59 13 76 24

73 1 57 11 60 34

52 94 21 67 9 77

And that’s the end