What we have

- A binary search function to find what position the game element is at on the grid based off of it's x position

What it does

- It converts specific ranges into integers
- We can do the same with a multiplier and then typecasting that down to an integer.

Logic

If we are taking doubles and converting them into numbers 0 -> 8 then we can do the same with a double -> int conversion. Double to int conversions are basically ranges into integers. So all we need is some transation which is just going to be some dumb multiplier.

Finding the dumb magic number

We can write a script that checks if the result of the maths returns all unique numbers. I found 1.8 as the magic number.

Test

Running a few tests through our now veyr small script we get this: 0.1 -> 0
0.35 -> 0
0.6 -> 1
0.85 -> 1
1.1 -> 1
1.35 -> 2
1.6 -> 2
1.85 -> 3
2.1 -> 3
2.35 -> 4
2.6 -> 4
2.85 -> 5
3.1 -> 5
3.35 -> 6
3.6 -> 6

3.85 -> 6
4.1 -> 7
4.35 -> 7
4.6 -> 8
4.85 -> 8
5.1 -> 9
5.35 -> 9