

All reachable squares in horizontal intervals. Let X_i be the offset within an interval of length i .

$$\forall i: i < j, x_i \leq x_j \leq x_i + j - i$$

Start with each $x_i = 0$. Loop from $i = \text{largest interval length}$ down to 2. Move $i - 2 + x_i - x_{i-1}$ times to the right, and then $i-2$ times to the left.

X_1	0	Goal : 0
X_2	0	Goal : 1
X_3	0	Goal : 2
X_4	0	Goal : 2
X_5	0	Goal : 3

(1)

$i = 5$ Move $i - 2 + x_i - x_{i-1}$ times to the right, and then $i-2$ times to the left.
Moving $5 - 2 + 3 - 2 = 4$ right ; 3 left

X_1	0	Goal : 0
X_2	0	Goal : 1
X_3	0	Goal : 2
X_4	0	Goal : 2
X_5	1	Goal : 3

(2)

$i = 4$ Move $i - 2 + x_i - x_{i-1}$ times to the right, and then $i-2$ times to the left. $4 - 2 + 2 - 2 = 2$ right ; 2 left

X_1	0	Goal : 0
X_2	0	Goal : 1
X_3	0	Goal : 2
X_4	0	Goal : 2
X_5	1	Goal : 3

(3)

$i = 3$ Move $i - 2 + x_i - x_{i-1}$ times to the right, and then $i-2$ times to the left. $3 - 2 + 2 - 1 = 2$ right ; 1 left

X_1	0	Goal : 0
X_2	0	Goal : 1
X_3	1	Goal : 2
X_4	1	Goal : 2
X_5	2	Goal : 3

(4)

$i = 2$ Move $i - 2 + x_i - x_{i-1}$ times to the right, and then $i-2$ times to the left. $2 - 2 + 1 - 0 = 1$ right ; 0 left

X_1	0	Goal : 0
X_2	1	Goal : 1
X_3	2	Goal : 2
X_4	2	Goal : 2
X_5	3	Goal : 3

(5)