

## Search in Strictly Sorted Matrix

	0	1	2	3
0	1	2	3	4
1	5	6	7	8
2	9	10	11	12
3	13	14	15	16

target = 2

→ Take middle col & perform binary search on it

① If element (mid) == target  
Ans found

② If mid > target  
// ignore rows after it

③ If mid < target  
Ignore above rows

m = 6

now mid > 2, so elements after mid are also > 2, so ignore 2nd & 3rd row

Bounds → h start = 0  
& h end = 3  
From here get mid

In the end two rows are remaining

1	2	3	4
5	6	7	8

Suppose now →  
target = 3

① check whether the mid col you are at contain the ans i.e  
[2, 6]

Complexity →  $O(\log(N) + \log(M))$

② consider the 4 parts