

# 2146. K Highest Ranked Items Within a Price Range

You are given a **0-indexed** 2D integer array `grid` of size `m x n` that represents a map of the items in a shop. The integers in the grid represent the following:

- `0` represents a wall that you cannot pass through.
- `1` represents an empty cell that you can freely move to and from.
- All other positive integers represent the price of an item in that cell. You may also freely move to and from these item cells.

It takes `1` step to travel between adjacent grid cells.

You are also given integer arrays `pricing` and `start` where `pricing = [low, high]` and `start = [row, col]` indicates that you start at the position `(row, col)` and are interested only in items with a price in the range of `[low, high]` (**inclusive**). You are further given an integer `k`.

You are interested in the **positions** of the `k` **highest-ranked** items whose prices are **within** the given price range. The rank is determined by the **first** of these criteria that is different:

- Distance, defined as the length of the shortest path from the `start` (**shorter** distance has a higher rank).
- Price (**lower** price has a higher rank, but it must be **in the price range**).
- The row number (**smaller** row number has a higher rank).
- The column number (**smaller** column number has a higher rank).

Return the `k` highest-ranked items within the price range **sorted** by their rank (highest to lowest). If there are fewer than `k` reachable items within the price range, return **all** of them.

	0	1	2	3
0	Start 1	1	1	7
1	0	0	1	4
2	2	3	4	6
3	0	0	6	9

T	T	T	T
		T	T
T	T	T	T
		T	T

**Input:** `grid = [[1,1,1],[0,0,1],[2,3,4]]`, `pricing = [2,3]`, `start = [0,0]`, `k = 3`  
**Output:** `[[2,1],[2,0]]`  
**Explanation:** You start at `(0,0)`.  
With a price range of `[2,3]`, we can take items from `(2,0)` and `(2,1)`.  
The ranks of these items are:  
- `(2,1)` with distance 5  
- `(2,0)` with distance 6  
Thus, the 2 highest ranked items in the price range are `(2,1)` and `(2,0)`.  
Note that `k = 3` but there are only 2 reachable items within the price range.

ans:  $\left[ \left[ 2, 1 \right], \left[ 2, 0 \right] \right]$

11  
~~6, 2, 2, 0~~

8  
~~5, 3, 2, 1~~  
10  
~~5, 6, 3, 2~~

12  
~~6, 4, 3, 3~~

User Accepted:	1463
User Tried:	2194
Total Accepted:	1527
Total Submissions:	5139
Difficulty:	Medium

$d, p, r, c$

1  
~~0, 1, 0, 0~~

2  
~~1, 1, 0, 1~~

3  
~~2, 1, 0, 2~~

4  
~~3, 1, 1, 2~~

5  
~~3, 3, 0, 3~~

6  
~~4, 4, 1, 3~~

7  
~~4, 4, 2, 2~~

9  
~~5, 5, 2, 3~~