5391. Build Array Where You Can Find The Maximum Exactly K Comparisons

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eekly-contest-185/)

Given three integers `n`, `m` and `k`. Consider the following algorithm to find the maximum element of an array of positive integers:

```
maximum_value = -1
maximum_index = -1
search_cost = 0
n = arr.length
for (i = 0; i < n; i++) {
    if (maximum_value < arr[i]) {
        maximum_value = arr[i]
        maximum_index = i
        search_cost = search_cost + 1
    }
}
return maximum_index
```

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Hard

You should build the array arr which has the following properties:

- `arr` has exactly `n` integers.
- `1 <= arr[i] <= m` where `(0 <= i < n)`.
- After applying the mentioned algorithm to `arr`, the value `search_cost` is equal to `k`.

Return *the number of ways* to build the array `arr` under the mentioned conditions. As the answer may grow large, the answer **must be** computed modulo `10^9 + 7`.

Example 1:

```
Input: n = 2, m = 3, k = 1
Output: 6
Explanation: The possible arrays are [1, 1], [2, 1], [2, 2], [3, 1], [3, 2] [3, 3]
```

Example 2:

```
Input: n = 5, m = 2, k = 3
Output: 0
Explanation: There are no possible arrays that satisify the mentioned conditions.
```

Example 3:

```
Input: n = 9, m = 1, k = 1
Output: 1
Explanation: The only possible array is [1, 1, 1, 1, 1, 1, 1, 1, 1]
```

Example 4:

```
Input: n = 50, m = 100, k = 25
Output: 34549172
Explanation: Don't forget to compute the answer modulo 1000000007
```

Example 5:

```
Input: n = 37, m = 17, k = 7
Output: 418930126
```

Constraints:

- 1 <= n <= 50
- 1 <= m <= 100
- 0 <= k <= n

PHP

```php
class Solution {

    /**
     * @param Integer $n
     * @param Integer $m
     * @param Integer $k
     * @return Integer
     */
    function numOfArrays($n, $m, $k) {

    }
}
```