
Number of rotations (2)**P55375_en**

Given a (non empty) circularly sorted vector of integers, find the number of times the vector is rotated. Assume that there are no duplicates in the vector and the rotation is in anti-clockwise direction.

For instance,

- $[8, 9, 10, 2, 5, 6]$ is rotated three times,
- $[9, 10, 2, 5, 6, 8]$ is rotated two times,
- $[4, 0, 1, 2, 3]$ is rotated one time, and
- $[2, 5, 8, 9, 12]$ is rotated zero times.

Solve this problem *with recursion in logarithmic time*, using this header in C++:

```
int number_of_rotations (const vector<int>& v);
```

or this header in Python:

```
number_of_rotations(v: list[int]) -> int
```

Write the specification of the recursive function that you will need to write in a comment at the beginning of such function.

Observation

You only need to submit the required procedure; your main program will be ignored.

Problem information

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