

# 2058. Find the Minimum and Maximum Number of Nodes Between Critical Points

## Description

A **critical point** in a linked list is defined as **either** a **local maxima** or a **local minima**.

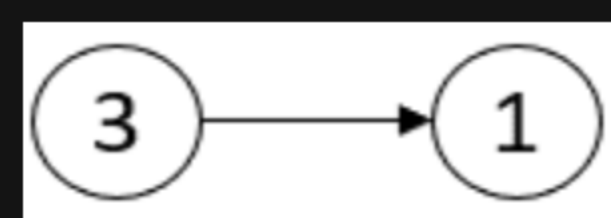
A node is a **local maxima** if the current node has a value **strictly greater** than the previous node and the next node.

A node is a **local minima** if the current node has a value **strictly smaller** than the previous node and the next node.

Note that a node can only be a local maxima/minima if there exists **both** a previous node and a next node.

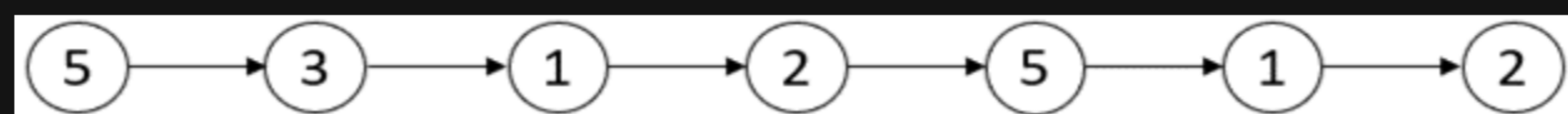
Given a linked list `head`, return *an array of length 2 containing* `[minDistance, maxDistance]` *where* `minDistance` *is the* **minimum distance between any two distinct critical points** *and* `maxDistance` *is the* **maximum distance between any two distinct critical points**. *If there are fewer than two critical points, return* `[-1, -1]`.

### Example 1:



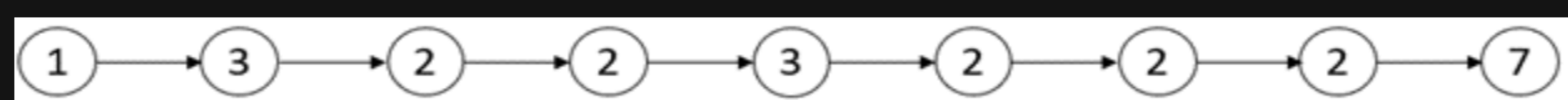
**Input:** head = [3,1]  
**Output:** [-1,-1]  
**Explanation:** There are no critical points in [3,1].

### Example 2:



**Input:** head = [5,3,1,2,5,1,2]  
**Output:** [1,3]  
**Explanation:** There are three critical points:  
- [5,3, 1, 2, 5, 1, 2]: The third node is a local minima because 1 is less than 3 and 2.  
- [5,3,1,2, 5, 1, 2]: The fifth node is a local maxima because 5 is greater than 2 and 1.  
- [5,3,1,2,5, 1, 2]: The sixth node is a local minima because 1 is less than 5 and 2.  
The minimum distance is between the fifth and the sixth node. minDistance = 6 - 5 = 1.  
The maximum distance is between the third and the sixth node. maxDistance = 6 - 3 = 3.

### Example 3:



**Input:** head = [1,3,2,2,3,2,2,2,7]  
**Output:** [3,3]  
**Explanation:** There are two critical points:  
- [1, 3, 2, 2, 3, 2, 2, 7]: The second node is a local maxima because 3 is greater than 1 and 2.  
- [1,3,2,2, 3, 2, 2, 7]: The fifth node is a local maxima because 3 is greater than 2 and 2.  
Both the minimum and maximum distances are between the second and the fifth node.  
Thus, minDistance and maxDistance is 5 - 2 = 3.  
Note that the last node is not considered a local maxima because it does not have a next node.

### Constraints:

- The number of nodes in the list is in the range `[2, 105]`.
- `1 <= Node.val <= 105`

