PROBLEM STATEMENT:

Given a sequence of K elements, we can calculate its **difference sequence** by taking the difference between each pair of adjacent elements. E.g. **The difference sequence of [5, 6, 3, 9, -1] is [6-5, 3-6, 9-3, -1-9] = [1, -3, 6, -10]**

Formally, the difference sequence of the sequence $a_1, a_2, \dots, a_k$ is $b_1, b_2, \dots, b_{k-1}$, where $b_i = a_{i+1} - a_i$.

The derivative sequence of order N of a sequence A is the result of applying the above process N times. For example, if A = [5,6,3,9,-1], the derivative sequence of order 2 is: [5, 6, 3, 9, -1] -> [1, -3, 6, -10] -> [-3-1, 6-(-3), -10-6] = [-4, 9, -16].

Write a Python program that computes the derivative sequence of order N of a given input sequence USING RECURSION, where 0≤N. The input sequence and the order will be given as the command-line arguments: sys.argv[1] will be the sequence, sys.argv[2] will be the order. The output should only be printed to the console.

INPUT FORMAT

Sample command line inputs:

```
python3 quiz7.py [5,6,3,9,-1] 4
python3 quiz7.py [9,-6,3,0,4,-7] 2
```

OUTPUT FORMAT

1. Your program should print the following sentence to the console before outputting the results:

```
Quiz 7: Recursion
```

2. Expected outputs in the console for the given sample inputs:

```
[-38]
[24, -12, 7, -15]
```

SUBMISSION FORMAT

Zip your file before submitting (not .rar, only .zip files are supported by the system). File hierarchy:

- **<student id>.zip**
  - **quiz7.py**