Lab 6 C

The Mystery of the Missing Clue 🕵️‍♀️

Detective Narain needs your help! He's following a trail of clues, each connected in a sequence (a linked list). But to solve the case, he must find the third-to-last clue in the sequence. Can you crack the case?

Your Task:

- Create a linked list based on the clues (numbers) provided.
- Find the third-to-last clue in the sequence.

If the sequence is too short (fewer than three clues), you must report: "The trail's gone cold!"

Input Format:

- The first line contains an integer **N**, representing the number of elements.
- The second line contains an integer array **clues[]**, representing the clues.

Output Format:

Print the third-to-last clue.**3rd last clue**.

Constraints:

- 0 ≤ **N** ≤ 10e6
- 0 ≤ **clues** ≤ 10e18

Example:

Input 1:

```
5
10 22 35 41 15
```

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Output 1:

```
35
```

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Help Narain solve the case before the trail goes cold! 🔍

Problem 2: LinkedList Rotation

King Harshvardhan gave you the head of a linked list and want you to rotate the list to the right by k places inorder to get full marks.

Input Format:

- The first line contains an integer array representing the linked list elements.
- The second line contains an integer **k**, representing the number of places to rotate the list.

Output Format:

Print the rotated linked list.

Constraints:

- The number of nodes in the list is in the range [0, 500].
- -100 ≤ **Node.val** ≤ 100
- 0 ≤ **k** ≤ $2 * 10^9$

Example 1:

```
Input:
head = [1,2,3,4,5]
k = 2

Output:
[4,5,1,2,3]
```

Example 2:

```
Input:
head = [0,1,2]
k = 4

Output:
[2,0,1]
```

Problem 3: The Grand Pie Conundrum

At the Annual Pie Festival, two bakers, Baker Bender and Baker Fry, delight the townsfolk with their delicious pies. They believe in fairness and want everyone to enjoy an equal number of slices. However, they face a peculiar challenge: each pie has a different number of slices. Their goal is to determine the maximum number of people who can share their pies without leaving any leftover slices. Your task is to assist the bakers in finding the largest number of people who can enjoy their pies each day!

Input Format:

- The first line contains an integer `N`, representing the number of days.
- The next `N` lines each contain two integers: `s1` (slices in Baker Bender's Pie) and `s2` (slices in Baker Fry's Pie).

Constraints:

- $1 \leq N \leq 100$
- $1 \leq s1, s2 \leq 10^{18}$

Output Format:

Return a single integer: the largest number of people that was served during the festival

Input 1:

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```
 3
12 15
18 24
24 36
```

Output 1:

```
12
```

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Explanation:

In the first example, the maximum number of slices that can be evenly divided between Baker Bender and Baker Fry for each pair of cakes are:

- For the pair (12, 15), they can serve 3 people, with each person getting 4 slices from the first cake and 5 from the second cake.
- For the pair (18, 24), they can serve 6 people, with each person getting 3 slices from the first cake and 4 from the second cake.
- For the pair (24, 36), they can serve 12 people, with each person getting 2 slices from the first cake and 3 from the second cake.

The largest number of people they can serve during the festival is `12`.

In the second example, they can only serve 1 from both pairs, so the output is `1`.

Input 2:

```
2
7 5
13 27
```

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Output 2:

```
1
```

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