

Cryptopangrams (10pts, 15pts)

Practice Submissions

Attempt 2	RE	Feb 14 2020, 17:02
Test 4	Completed	Feb 14 2020, 17:01
Test 3	Completed	Feb 14 2020, 14:17
Attempt 1	RE	Feb 14 2020, 14:14
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Last updated: Apr 11 2020, 17:31

PROBLEM

ANALYSIS

Problem

On the Code Jam team, we enjoy sending each other *pangrams*, which are phrases that use each letter of the English alphabet at least once. One common example of a pangram is "the quick brown fox jumps over the lazy dog". Sometimes our pangrams contain confidential information – for example, C3 QUIZ: KNOW BEVY OF DP FLUX ALGORITHMS – so we need to keep them secure.

We looked through a cryptography textbook for a few minutes, and we learned that it is very hard to factor products of two large prime numbers, so we devised an encryption scheme based on that fact. First, we made some preparations:

Attempt 2 - Feb 14 2020, 17:02

Java (OpenJDK)

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```
1 import java.util.Scanner;
2
3 public class Solution {
4
5     public static void main(String... p) throws Exception {
6         Scanner input = new Scanner(System.in);
7
8         int numCases = input.nextInt();
9         for (int i = 0; i < numCases; i++) {
10             int n = Integer.parseInt(input.next());
11             int l = Integer.parseInt(input.next());
12             int[] a = new int[l];
13
14             for (int j = 0; j < l; j++) {
15                 a[j] = Integer.parseInt(input.next());
16             }
17             String result = solution(i + 1, n, a);
18             System.out.println(result);
19         }
20
21         input.close();
22     }
23
24     public static int maxPrime = 10101;
25
26     public static String solution(int i, int n, int[] a) {
27
28         boolean[] primeNumbers = computePrimes(n);
29         // System.out.println("primeNumbers=" + Arrays.toString(primeNumbers));
30
31         boolean[] usedPrimes = new boolean[maxPrime];
32
33         int aB = a[0];
34     }
```