# **ICPC Assiut University Community**

# **Newcomers Training , Do Your Best**

HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

# O. Help Koko

time limit per test: 1 second 
memory limit per test: 256 megabytes input: standard input output: standard output

Yesterday morning Koko came back from college not happy because his mentor gave him a problem and he didn't solve it.

His mentor gave him a list of numbers and asked him to do one of two operations on each number in the list:

 $1^{st}$  operation is to check if the number is prime or not, if it's not a prime number then he should print -1, and if it's a prime number he should multiply it by  $5^X$  then multiply it by  $3^X$  and print the last digit of the result.

 $2^{nd}$  operation is multiplying the number by  $2^X$  then multiplying it by  $5^X$  and print the last digit of the result.

Koko needs your help to solve this problem.

#### Input

Input consists of 3 lines, first line consists of N and X ( $1 \le N \le 10^5$ ),( $1 \le X \le 1000$ ) — the size of the list and the exponent mentioned in the problem.

Second line consists of N space-separated integers  $a_1, a_2, ..., a_n$   $(1 \le a_i \le 10^6)$  — the numbers in the list.

Third line consists of N space-separated integers op1,op2,...,opn and opi is {1 or 2} —

1 is the first operation, 2 is the second one.

#### **Output**

For the  $i_{th}$  number in the list apply the  $i_{th}$  operation and print the answer to the problem with a space separating each answer.

# Examples

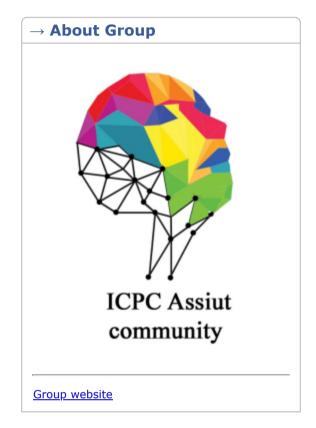
input	Сору
3 2	
1 4 3	
2 2 1	
output	Сору
0 0 5	
input	Сору
1 1	
10	
1	
output	Сору
-1	

# <u>Assiut University Training - Newcomers</u>

#### **Public**

## **Participant**





# → Group Contests



- Sheet #10 (General Hard)
- Sheet #9 (General medium)
- Sheet #8 (General easy)
- Sheet #7 (Recursion)
- Sheet #6 (Math Geometry)
- Sheet #5 (Functions)
- Sheet #4 (Strings)
- Contest #3.1
- Sheet #3 (Arrays)
- Contest #2
- Sheet #2 (Loops)
- Contest #1
- Sheet #1 (Data type Conditions)

## Sheet #10 (General Hard)

## **Finished**

**Practice** 



## → About Time Scaling

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the <a href="link">link</a>.