1. **Lamps**

An electronics shop sells red and blue lamps. A red lamp costs **X** rupees and a blue lamp costs **Y** rupees.

Amar is going to buy exactly **N** lamps from this shop. Find the minimum amount of money Amar needs to pay such that at least **K** of the lamps bought are red.

Input Format:
A single line containing four space-separated integers **N, K, X, Y.**

Output Format:
The minimum amount of money Amar needs to pay in order to buy **N** lamps such that at least **K** of the lamps bought are red.

Sample I/O:

Input 1:
2 2 5 1

Output 1:
10

Input 2:
4 1 3 1

Output 2:
6

Input 3:
5 2 3 4

Output 3:
15

Explanation:

Input 1:
Amar buys 2 red lamps with 2.5 = 10 rupees

Input 2:
Total lamps Amar wants to buy are 4
Amar wants to by 1 red lamp so 1.3 = 3
The remaining 3 lamps can be red or blue
Buying 3 red lamps will cost Amar 3.3 = 9 rupess
while buying 3 blue lamps will cost 3.1 = 3 rupees
Since Amar wants to minimize the amount, he will buy 3 blue lamps Thus by making the total amount
3 (1 red lamp) + 3 (3 blue lamps) = 6

2. **Nearest Prime**

Joy is a hacker at hackerclub and he got a new problem on prime numbers.The problem states that given an integer **N** find the nearest prime number to **N**.If multiple answer is possible then output the smallest one of them.There are **T** number of test cases.

Constraints
$1 <= N < 10^6$
$1 <= T <= 2*10^6$

Input Format :
First line of input contains an Integer **T** denoting the number of test cases.
Next each of the **T** lines contain one integer **N**.

Output Format :
output the nearest prime number possible to N in a new line

Sample Test Case

Input:
3

51

12

 65

Output:
53

 11

 67

3.   **Infinite**

Write a Program that takes a number as input and prints its square infinitely many times until -1 is given as input.

In other words keep on taking a number and printing its square as long as -1 is not entered as input.

Note: Once -1 is entered as input you can break out of the loop without printing its square.

Sample I/O:

Input Format:
A single line input contains an integer N.

Output Format:
Print the output according to the Problem.

Input 1:
12
16
-14
-12
-1

Output 1:
144
256
196
144

Input 2:
-14
5
-33
47
39
-1

30
-11
-41
-18

Output 2:
196
25
1089
2209
1521