

1 Retired Wabbit

1.1 Problem Statement

After retiring from his post as the Mayor of Bunnyland, Benson the Wabbit has a lot of free time. Hence, he plays video games to think of ideas for NOI and IOI problems (orz).

There are N monsters in the video game, which lasts over Q in-game days. Monsters regenerate overnight, so you can kill each monster once per day. Killing the i^{th} monster will give Benson P_i points, but he only has enough resources to kill X_i monsters on day i .

There is a bonus bar in the game. This bonus bar fills up after killing K monsters and can be used to kill one monster for double the points. Note that killing a monster for double points will empty the bonus bar and will **not** contribute to refilling the bar however do note that it counts towards your X_i limit. The bar will be reset to empty at the beginning of each day. You can kill monsters in any order.

Benson wants to find the maximum number of points he can get in each day of the game. Help him!

1.2 Input Format

The input format is as follows:

- The first line of input will contain 3 spaced integers, N , Q and K .
- The next line of input will contain N spaced integers P_1, P_2, \dots, P_N .
- The next line of input will contain Q spaced integers X_1, X_2, \dots, X_Q .

1.3 Output Format

The output format is as follows:

- There are Q lines of output.
- The i^{th} line should contain a single integer, the maximum number of points Benson can get on day i .

1.4 Subtasks

For all testcases, it is guaranteed that:

- $1 \leq N, Q \leq 300000$
- $1 \leq K, X_i \leq N$
- $1 \leq P_i \leq 10^9$

Subtask	Score	K	Q	Additional constraints
1	0	Sample Testcases		
2	18	$K = N$	-	-
3	12	-	-	$P_i = 1$
4	36	-	$Q = 1$	-
5	34	-		

1.5 Sample Testcases

standard input	standard output
5 2 5 7 2 5 9 3 5 2	26 16
9 9 3 1 1 1 1 1 1 1 1 1 1 2 3 4 5 6 7 8 9	1 2 3 5 6 7 8 10 11

1.6 Sample Testcase Explanation

For sample input 2, on day 4, Benson can kill the monsters 3, 7, 5 to fill up his bonus bar, and then kill monster 1 for double points. This gives him 5 points in total.