# Fight the Monsters!



Jason is trapped in a forest with n hungry monsters and must use his trusty blaster to defend himself! Each monster i has a health value,  $h_i$ . Jason can discharge his blaster at a monster once per second and reduce its health points by hit units. Once a monster's health points become  $\leq 0$ , it dies.

Given the health values for each monster and an integer, t, can you determine the maximum number of monsters he can kill in t seconds? Assume Jason always hits his target!

## **Input Format**

The first line consists of three space-separated integers describing the respective values of n, hit, and t. The second line consists of n space-separated integers describing the values of  $h_0, h_1, \ldots, h_{n-1}$ .

#### **Constraints**

- $1 \le n \le 10^5$
- $1 \le hit \le 10^9$
- $1 < t < 10^9$
- $1 < h_i < 10^9$

### **Output Format**

Print an integer denoting the maximum number of monsters Jason can kill in  $m{t}$  seconds.

#### Sample Input 0

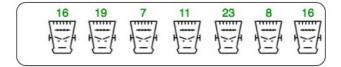
7 8 6 16 19 7 11 23 8 16

### **Sample Output 0**

4

## **Explanation 0**

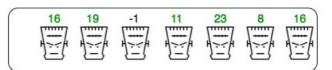
We want to find the maximum number of monsters we can kill in t=6 seconds using a blaster that does hit=8 units of damage per second. The diagram below depicts the array of initial health values, h=[16,19,7,11,23,8,16]:



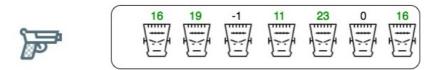
The optimal approach is as follows:

1. Shoot monster 2 so  $h_2 = 7 - 8 = -1$ , monster 2 dies, and h becomes [16, 19, -1, 11, 23, 8, 16]:

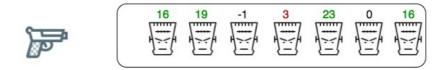




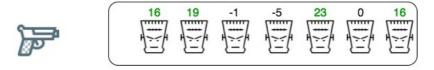
2. Shoot monster 5 so  $h_5=8-8=0$ , monster 5 dies, and h becomes [16,19,-1,11,23,0,16]:



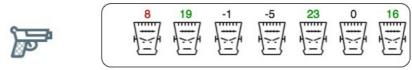
3. Shoot monster 3 so  $h_3=11-8=3$  and h becomes [16,19,-1,3,23,0,16]:



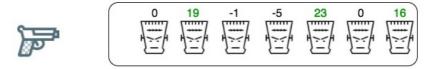
4. Shoot monster 3 again so  $h_3=3-8=-5$ , monster 3 dies, and h becomes [16,19,-1,-5,23,0,16]:



5. Shoot monster 0 so  $h_0=16-8=8$  and h becomes [8,19,-1,-5,23,0,16] :



6. Shoot monster 0 again so  $h_0=8-8=0$ , monster 0 dies, and h becomes [0,19,-1,-5,23,0,16]:



Thus, we print  ${f 4}$  as the maximum number of monsters we can kill in the given time period.