

# Gold Medal

Input file:            **standard input**  
Output file:           **standard output**  
Time limit:            1 second  
Memory limit:         1024 megabytes

What a busy week! This weekend,  $n$  programming contests will be held at the same time.

Each contest will award one gold medal for every  $k$  participating teams. That is to say, if there are  $t$  teams participating in the contest,  $\lfloor \frac{t}{k} \rfloor$  gold medals will be awarded, where  $\lfloor x \rfloor$  is the largest integer not exceeding  $x$ . Currently, there will be  $a_i$  teams participating in the  $i$ -th contest.

BaoBao is the coach of a university with  $m$  teams, and he hasn't decided which contests these teams should participate in. Please help him assign each team to a contest, so that the total number of gold medals handed out by all contests is maximized.

## Input

There are multiple test cases. The first line of the input contains an integer  $T$  ( $1 \leq T \leq 100$ ) indicating the number of test cases. For each test case:

The first line contains two integers  $n$  and  $k$  ( $1 \leq n \leq 100$ ,  $1 \leq k \leq 10^9$ ), indicating the number of contests and the ratio of gold medals.

The second line contains  $n$  integers  $a_1, a_2, \dots, a_n$  ( $1 \leq a_i \leq 10^9$ ), where  $a_i$  is the current number of teams participating in the  $i$ -th contest.

The third line contains an integer  $m$  ( $1 \leq m \leq 10^9$ ), indicating the number of teams you need to assign a contest to.

## Output

For each test case output one line containing one integer indicating the maximum total number of gold medals handed out by all contests.

## Example

standard input	standard output
2	91
3 10	1400
239 141 526	
6	
2 1	
300 100	
1000	

## Note

For the first sample test case, send 2 teams to the 1-st contest and 4 teams to the 3-rd contest. The total number of gold medals will be  $\lfloor \frac{239+2}{10} \rfloor + \lfloor \frac{141+0}{10} \rfloor + \lfloor \frac{526+4}{10} \rfloor = 24 + 14 + 53 = 91$ .