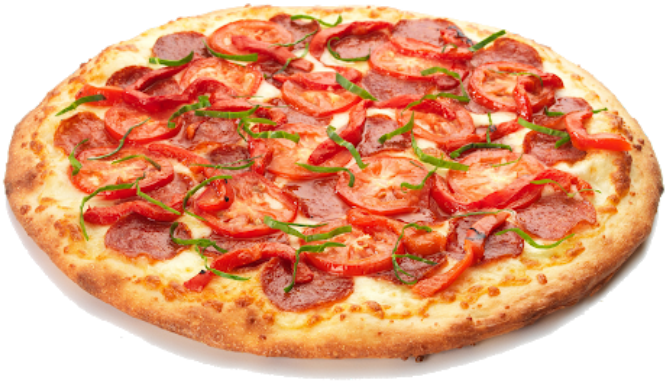
Vinit and His Pizza Cravings in Quarantine

Vinit loves Pizza! He visits the **Binary Pizza Shop** to buy some of his favorite flavors.

The owner of the bakery, **Sharmishtha**, is a clever woman. As she knows that **Vinit** is a **BIG** foodie guy, She does not want **Vinit** to finish all her Pizzas as there is shortage of raw materials due to COVID-19 lockdown. Hence, she plays a game.

Vinit is given N numbers and has to select K of these numbers. For each number that **Vinit** chooses, he will get as many pizza as the number of 1's in the Binary representation of the number.



Help Vinit to find the maximum number of Pizzas that he can have.

> In return, he will treat you with a Pizza after the COVID-19 lockdown ends! :XD :P
> Ping him on Twitter(@Vinit_Shahdeo)

Input Format

The first line of input contains T. T test cases follow.
First line of each test cases contains 2 space-separated integers N and K.
The next line contains N space-separated integers.

Constraints

$1 \le T \le 10$
$1 \le N \le 10^3$
$0 \le K \le N$
$0 \le Numbers \le 10^5$

Output Format

For each test cases, print the answer in a new line.

Sample Input 0

```
1
4 2
6 1 2 0
```

Sample Output 0

```
3
```

Explanation 0

He chooses numbers 6 (110) and 1 (001) with 2 and 1 set bits respectively.

Submissions: 13
Max Score: 10
Difficulty: Medium

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Current Buffer (saved locally, editable) C++

```cpp
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;


int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    return 0;
}
```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code