PICK UP DROP ESCAPE

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You are given with an array of n numbers. You must pick K elements from the array such that XOR of all the chosen elements is maximum.

http://en.wikipedia.org/wiki/Bitwise_operation#XOR

Input Specification:

The first line consists of an integer t representing the number of test cases. For each test case the first line consists of two numbers n and K denoting the number of elements in the array and the number of elements to be chosen respectively. Then in the next n lines, the elements in the array are given.

Output Specification:

For each test case print a line containing one integer denoting the maximum XOR value of the chosen K elements.

Input Constraints:

1<=t<=100

1<=n<=20

1<=k<=n

1<=element value<=10000

Sample Input:

2

5 3

1

2

3

4

5

5 3

3

4

5

7

4

Sample Output:

7

7