

## 2164 Cable Network

A local cable network is planning to expand their services to a neighboring city. For that, a transmission center is being built and a cable net connecting the new clients has to be installed. Each client has to be connected to the center in the cable net.

The network organized a survey and has now the addresses of all potential clients. Also it has an estimate on the cost of installing each cable link through the city.

The network board of directors has decided to offer the following initial subscription package: Each new client will pay a fixed subscription fee and will get the first three months of service for free. This ensures a **potential initial capital** for building the cable net, which is simply the number of potential clients (according to the survey) multiplied by the subscription fee.

The decision on what links to build in this first phase will be done according to the following. A set of links induces a **loss in the potential initial capital**, defined as  $l + (t * d)$ , where  $l$  is the cost of installing the links in the set,  $t$  is the subscription fee and  $d$  is the number of potential clients that are **not** connected to the center by this set of links. The board of directors decided they will build a set of links that induces a loss as small as possible in the potential initial capital.

Your job is to write a program to compute the minimum possible loss in the potential initial capital. For that, you are given the location of each potential client as well as the center location. Also, you are given the costs of all possible net links and the value of the subscription fee.

### Input

The input file contains the description of several instances. An instance with  $n = 0$  indicates the end of the input. Your program should not process this instance.

The first line of the file, contains two positive integers:  $n$  ( $0 \leq n \leq 20$ ) representing the number of potential clients and  $t$  representing the subscription fee. Each potential client is identified by a number between 1 and  $n$  while the center is identified by 0. Next, there is a line for each  $i$  from 0 to  $n - 1$ . In line  $i$  there is a list of  $n - i$  positive integers. Each integer, say the  $j$ -th one, represents the cost of installing a link between  $i$  and  $j$ .

### Output

For each instance, your program should print three lines; the first contains 'Cable Net # $j$ ', where  $j$  is the number of the instance; in the second line, it should print the potential initial capital for that instance and in the third line, the value of the minimum possible loss in the potential initial capital for that instance. Your program should also print a blank line after the output of each instance.

### Sample Input

```
5 10
5 17 2 3 23
9 6 1 19
14 5 13
19 21
40
3 1
5 3 23
1 19
```

14  
0 1

### Sample Output

Cable Net #1  
50  
21

Cable Net #2  
3  
3