The greedy frog

P40088_en

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In a pond there are n stones $1, \ldots, n$ in a row. A frog must go from stone 1 to n, in principle going consecutively through stones 2, 3, ... The problem is that the frog is very greedy, and it will not help eating all the flies around each stone that it visits. To avoid fattening too much, the frog can make up to j big forward jumps, each one over at most two stones (that is, from i it can jump, at most, up to $i + 3$). What is the minimum number of flies that the frog will eat?

Input

Input consists of several cases. Every case begins with n and j, followed by the number of flies around each stone (n natural numbers between 0 and 10^4). Assume $2 \leq n \leq 1000$, and $0 \leq j < n$.

Output

For every case, print the minimum number of flies that the frog will eat.

Sample input

```
2 0  23 33
2 1  23 33
4 0  100 42 3 1000
4 1  100 42 3 1000
3 1  10000 10000 10000
5 1  1000 1000 0 1000 1000
5 2  1000 1000 0 1000 1000
5 4  1000 1000 0 1000 1000
```

Sample output

```
56
56
1145
1100
20000
3000
2000
2000
```

Problem information

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