Task 3

Darts

Task

You play darts by the following rule:

> You can throw at most 4 darts to the target. It is not necessarily to throw all 4 darts. It is allowed that you do not throw any darts. The target is divided into N parts, and the points of the parts are $P_1, \ldots, P_N$. Your score is based on the sum S of the points of the parts where darts hit. If S does not exceed given M, your score is S. However, if S exceeds M, your score becomes 0.

Write a program which, when the points of the parts and the value of M are given, calculates the maximum of scores you can get.

Input

The input file is named `input.txt`.

The first line contains two space-separated integers N ($1 \leq N \leq 1000$) and M ($1 \leq M \leq 200000000 = 2 \times 10^8$) in this order. The $(i+1)$-st line ($1 \leq i \leq N$) contains an integer P_i ($1 \leq P_i \leq 100000000 = 10^8$).

Among the data used for evaluation, 20% of the mark is given for test cases satisfying $N \leq 100$, and 50% of the mark is given for test cases satisfying $N \leq 300$.

Output

The output file is named `output.txt`.

The file should consist of one line, and the line should contain the maximum of scores you can get.

Sample inputs and outputs

Example 1

`input.txt`

```
4 50
3
14
15
9
```

output.txt

```
48
```

In this example, you get the maximum score when 3 darts hit the part of 15 points, and 1 dart hit the part of 3 points. Your score is 48.

Example 2

input.txt

```
3 21
16
11
2
```

output.txt

```
20
```

In this example, you get the maximum score when 1 dart hit the part of 16 points, 2 darts hit the part of 2 points. Your score is 20.