

STA Online Computer Programming Contest (DWITE)
October 2004

Problem 4

CD-ROM Files

Some CD-ROM's can hold up to 700MB of information. When using CD-ROM's as a storage device, it is beneficial to use as much space on the CD, as possible, when saving files.

In this particular program, you are to determine the most efficient way to store files on a CD-ROM, by using as much space, as possible, on the CD-ROM.

The input file (DATA4) will contain five lines of data, each line containing information about one CD-ROM. Each line will contain the following information: A, an integer, $0 < A \leq 10000$, the amount of storage space on the CD-ROM in MB, n, an integer, $0 < n \leq 10$, the number of files that you wish to store on the CD-ROM, and then n integers, $s_1..s_n$, $0 \leq s_1..s_n \leq 10000$ representing the size, in MB, of each of the n files. Each item is separated by a single space.

The output file (OUT4) will contain five lines of data. Each line will contain the sum of the file sizes stored on the CD-ROM, that results in the most amount of space used on the CD-ROM.

Sample Input (3 lines only)

```
700 4 500 300 300 100
700 5 200 750 75 240 420
650 3 400 100 400
```

Sample Output

```
700
695
500
```