

Output format:

Your program should print its output to the console.

In the first line of output, print the total penalty (sum of cubes of the number of spaces added in each line). The second line of output is blank.

Starting from the third line of the output, print the input words, formatted according to your algorithm. Try to distribute the spaces within a line to make the output be left and right justified.

In the sample output, extra spaces added are shown as plus symbol.

For this file, penalty with $M=72$ is 430, $M=93$ is 280, and, $M=132$ is 137.