Problem H
Harmonious Hue Palace

In the historic city of Hue, Vietnam, the revered king wants to construct a grand palace. The city is laid out in an $n \times n$ grid. The rows are numbered from 1 to n from north to south, and the columns are numbered from 1 to n from east to west. The cell on the i-th row and the j-th column of the grid is denoted as (i, j). Each cell radiates with either harmonious or ordinary energy.

The palace must be a rectangle within this grid, with its sides parallel to the city's borders. Also, to ensure fengshui alignment, among its 4 corners, exactly three must be harmonious and the other must be ordinary. Your task is to find a location to build the palace. The king is not patient, so you have to be quick!

Input

The first line of the input contains a single integer t $(1 \leq t \leq 10^5)$ – the number of test cases. t test cases follow, each is presented as below:

- The first line contains an integer n $(2 \leq n \leq 5000)$ – the size of the grid.
- The second line contains a string s – the **Base64-compressed** representation the grid, obtained by the following steps:
  - First, the grid is represented as matrix a of size $n \times n$, where $a_{i,j}$ equals to 0 if cell (i, j) is harmonious or 1 if this cell is ordinary.
  - The elements of a are then listed row-first to obtain zero-indexed binary string b of length $n \times n$. Formally, $b_{(i-1)\times n+(j-1)} = a_{i,j}$ for every $1 \leq i, j \leq n$.
  - b is then divided into continuous binary substrings of length 6. If the last substring has less than 6 characters, repeat adding `0` to the end of this string until its length equals 6. Let c_i be the i-th obtained substring.
  - For each string c_i obtained during the previous steps, denote $c_i = c_{i,0}c_{i,1}c_{i,2}c_{i,3}c_{i,4}c_{i,5}$. Then we calculate the value $d_i = \sum_{j=0}^{5} 2^j \times c_{i,j}$. It can be seen that $0 \leq d_i \leq 63$.
  - Finally, the string s is constructed as below: The i-th character of the string s equals to the d_i-th character of the following string (which has 64 characters, numbered from 0 to 63):

    `ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/`

See the sample explanation for better understanding.

It is guaranteed that the sum of n^2 over all test cases does not exceed 2.5×10^7.

Output

For each test case, if no appropriate placement for the palace exists, output `NO` on a single line.

Otherwise, output `YES` on the first line. On the second line, output four integers x_1, y_1, x_2 and y_2 ($1 \le x_1, y_1, x_2, y_2 \le n$, $x_1 \ne x_2$, $y_1 \ne y_2$), where (x_1, y_1) and (x_2, y_2) denote two opposite corners of the palace.

If there are multiple correct solutions, you can output any of them.

Sample Explanation

For the first testcase, the given matrix a is:

$$\begin{matrix} 0 & 0 & 1 \\ 0 & 1 & 0 \\ 1 & 0 & 1 \end{matrix}$$

The Base64-compressed representation of the grid is obtained by the following steps:

- $b = \texttt{001010101}$
- $c_0 = \texttt{001010}$, $c_1 = \texttt{101000}$
- $d_0 = 2^2 + 2^4 = 20$, $d_1 = 2^0 + 2^2 = 5$
- $s_0 = \texttt{U}$, $s_1 = \texttt{F}$

In this testcase, another valid placement of the palace is to place the top-left corner at cell $(1, 1)$ and the bottom-right corner at $(2, 3)$.

For the second testcase, the given matrix a is:

$$\begin{matrix} 1 & 0 & 1 \\ 0 & 1 & 0 \\ 1 & 1 & 1 \end{matrix}$$

For all placements of the palace, there are always at least two ordinary cells, violating the fengshui alignment.

For the third testcase, the given matrix a is:

$$\begin{matrix} 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 \\ 0 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 \end{matrix}$$

Sample Input 1	Sample Output 1
3 3 UF 3 VH 4 /zO	YES 1 3 2 1 NO YES 4 2 3 1