Code Number

Lili and Bibi are best friends, they have a special code that only the two of them can read. Because Jojo also wanted to understand the secret code, he asked Lili and Bibi. They told Jojo that their code is simple, as they named their secret code "Code Number". Help Jojo decode the secret code.

Format Input

Input consists of an integer T which indicates the number of the test case. The next T lines consist of sentences written in Code Number. Each sentences only consists of UPPERCASE ENGLISH LETTER and numbers and does not exceed 1000 characters in length.

Format Output

For each test case output the decoded sentences along with "`Case #T: `".

Constraints

- $1 \leq T \leq 100$

- $1 \leq |S| \leq 1,000$

Sample Input (standard input)

```
3
4 R053 8Y 4NY 07H3R N4M3 WOULD 5M3LL 45 5W337
90W3R CORRU975 4850LU73 90W3R CORRU975 4850LU73LY
238R45 4ND 60R1LL45
```

Sample Output (standard output)

```
Case #1: A ROSE BY ANY OTHER NAME WOULD SMELL AS SWEET
Case #2: POWER CORRUPTS ABSOLUTE POWER CORRUPTS ABSOLUTELY
Case #3: ZEBRAS AND GORILLAS
```

Note

The conversions are the following:

$0 \Rightarrow$ O
$1 \Rightarrow$ I
$2 \Rightarrow$ Z
$3 \Rightarrow$ E
$4 \Rightarrow$ A
$5 \Rightarrow$ S
$6 \Rightarrow$ G
$7 \Rightarrow$ T
$8 \Rightarrow$ B
$9 \Rightarrow$ P

Code Number

Lili dan Bibi adalah teman baik, mereka memiliki sebuah kode spesial yang hanya mereka berdua pahami. Karena Jojo ingin memahami kode rahasia tersebut, ia bertanya kepada Lili dan Bibi. Mereka mengatakan kepada Jojo bahwa kode mereka sangat sederhana sehingga mereka menamainya "Code Number". Bantu Jojo mendekode kode rahasia tersebut.

Format Input

Input terdiri dari sebuah bilangan bulat T yang menandakan jumlah kasus uji. T baris berikutnya berisi kalimat yang dituliskan dalam Code Number. Setiap kalimat hanya terdiri dari HURUF INGGRIS KAPITAL dan angka-angka, dan panjangnya tidak melebihi 1000 karakter.

Format Output

Untuk setiap kasus uji, keluarkan kalimat yang terdekode beserta "`Case #T: `".

Constraints

- $1 \leq T \leq 100$
- $1 \leq |S| \leq 1,000$

Sample Input (standard input)

```
3
4 R053 8Y 4NY 07H3R N4M3 WOULD 5M3LL 45 5W337
90W3R CORRU975 4850LU73 90W3R CORRU975 4850LU73LY
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Sample Output (standard output)

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Case #1: A ROSE BY ANY OTHER NAME WOULD SMELL AS SWEET
Case #2: POWER CORRUPTS ABSOLUTE POWER CORRUPTS ABSOLUTELY
Case #3: ZEBRAS AND GORILLAS
```

Note

Konversi kode sebagai berikut:

$0 \Rightarrow O$

$1 \Rightarrow I$

$2 \Rightarrow Z$

$3 \Rightarrow E$

$4 \Rightarrow A$

$5 \Rightarrow S$

$6 \Rightarrow G$

$7 \Rightarrow T$

$8 \Rightarrow B$

$9 \Rightarrow P$