**Problem 1 – Enigma**

You are given **n** lines of encrypted messages. The messages will contain ASCII characters. In each message, only the **Latin letters and special characters will be encrypted**. The numbers and whitespace will not be encrypted. Your task is to write a program to decrypt the messages. The formula for the decrypting each letter is **X = k + m**, where **X** is the ASCII code of the decrypted letter, **k** is the ASCII code of the encrypted character and **m** is the **integer** **half of the length** of the input line, **without the numbers and whitespace**. (Hint: length()/2)

**Input**

The input comes from the console. The first line holds the **count** **n**. After that there are **n lines** with the encrypted messages.

The input data will always be valid and in the format described. There is no need to check it explicitly.

**Output**

Print at the console the decrypted messages, each on **separate line.**

Each message should hold the numbers, whitespace and decrypted letters. See the examples below.

**Constraints**

The **count** **n** will be an integer number in the range [1…50].

The input **lines length** will be an integer number in the range [1...35].

The input **lines** may hold **any ASCII character.**

Time limit: 0.2 sec. Memory limit: 16 MB.

**Examples**

|  |  |
| --- | --- |
| **Input** | **Output** |
| 1  Ie\jkd\_ ^Wi =h[Wj I[Yh[j | SoftUni has Great Secret  *The length without whitespaces is 21. Integer division 21/2 = 10. ASCII(I) = 73. 73 + 10 = 83. 83 = ASCII(S). . ASCII(e) = 101. 101 + 10 = 111. 111 = ASCII(o).* |
| **Input** | **Output** |
| 3  Tbi`ljb  rm rfc  grkdib | Welcome  to the  jungle |
| **Input** | **Output** |
| 1  P^ aZo^ 350 fbllbe^l | We have 350 missiles |