# Message Decrypter

Create a program, that **checks** if **inputs** have a **valid message** and **decrypt** it. On the **first** line you will **receive** a **number** that **indicates** how **many** **inputs** you will **receive** on the **next** lines**.**

A message is **valid** when:

* There is **nothing** else **before** and **after it**
* It **starts** with a **tag**, which is **surrounded** by either '**$**' or '**%**' (but **not both** at the same time), the tag itself has to be **minimum 3** characters long, **start** with a **uppercase** letter, **followed** **only** by **lowercase** letters
* There is a **colon** and a single **white space** after the tag
* There are **3 groups** consisting of **numbers** between '**[**' and '**]**', followed by a **pipe** ('**|**')

**Example for a valid message:**

**"$Request$: [73]|[115]|[32]|"**

You must **check** if the **message** is **valid** and if it **is**- **decrypt** it, if it **isn’t** - **print** the following **message**:

**"Valid message not found!"**

**Decrypting** a **message** means to **take** **all** **numbers** and **turn** them **into** **ASCII** **symbols**. After successful decrypt, print it in the following format:

**{tag}: {decryptedMessage}**

## Input

* On the **first** line - **n** - the count of inputs.
* On the **next** **n** lines - **input** that you have to **check** if it has a **valid** **message**.

## Output

* Print all results from each input, each on a new line.

## Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comment** |
| 4  $Request$: [73]|[115]|[105]|  %Taggy$: [73]|[73]|[73]|  %Taggy%: [118]|[97]|[108]|  $Request$: [73]|[115]|[105]|[32]|[75]| | Request: Isi  Valid message not found!  Taggy: val  Valid message not found! | We have 3 input lines to check. The first one follows the rules and is valid. The second one doesn’t because the tag is surrounded by both '%' and '$'. The third one has a valid message and is in the beginning of the input. The last one is invalid because it has more than 3 groups of numbers. |
| 3  This shouldnt be valid%Taggy%: [118]|[97]|[108]|  $tAGged$: [97][97][97]|  $Request$: [73]|[115]|[105]|true | Valid message not found!  Valid message not found!  Valid message not found! |  |