# Robot Communication

*There is a Galaxy far away, where all of the planets are populated with robots, who communicate with each other through encrypted messages. You have a mission to decrypt the messages they send to each other and report them to the Earth station.*

You will be given several input lines, consisting of encrypted messages between the robots. Read them, until you receive the command “**Report**”.

There are a few encoded strings in each of the messages and you must find them. After you have found such string, you have to **decrypt** it. **Print** each line **immediately after** you have decrypted it. The encoded string consists of – a **single comma** (**,**) or an **underscore** (**\_**), a **sequence of English Alphabet letters**, and a **digit** at the end of it. **Examples:** “**,htr7**”, “**\_lki5**”, “**,edsr2**“.

In order to **decode** a **message**, you have to either **add** or **subtract** the **value** of the **digit inside the match** from the **ASCII code** of **each** of the **characters** **in the sequence**. If the front character is a **comma** (**,**) you have to **add** the **digit** to the **ASCII codes** of the characters and if it’s an **underscore** (**\_**), you must **subtract** it. Print the decoded words from each line **separated by a single space**.

### Input

* The input comes in the form of input lines containing the encoded messages.
* When you receive the command “**Report**” the input sequence ends.

### Output

* You must print each line, **immediately** after you’ve decoded it.
* Print the decoded words separated by a single space.

### Constrains

* The input lines may consist of any **ASCII character**.
* When you **replace** the **memorized** patterns, you must do it in **the order** in which you’ve **found the patterns**.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| zsjfg,Ilsb3kdrgjshdg\_lv3gfyts&\*,bsbovqefkd3djgheuh  Report | Love is everything |
| vbe4g,Qmdrslg2vbf  sfa\_gpsfwfs1ret  Report | Softuni  forever |