Registration

Create a program, that **checks** if **registrations** are **valid**. A registration consists of a **Username** and a **Password.** On the **first** line you will **receive** a **number** that **indicates** how **many inputs** you will **receive** on the **next** lines**.**

A registration is **valid** when:

- The username is surrounded by **"U$"**
- The username needs to be **minimum 3** characters long, **start** with an **uppercase** letter, **followed only** by **lowercase** letters
- The password is surrounded by "P@$"
- The password needs to start with **minimum 5** alphabetical letters **(not including digits)** and must end with **a digit**

  Example for a valid registration:

"U$MichaelU$P@$asdqwe123P@$"

You must **check** if the **registration** is **valid** and if it **is** print:

"Registration was successful"

"Username: {Username}, Password: {Password}"

If it **isn't** - **print** the following **message**:

"Invalid username or password"

In the end print the count of successful registrations:

"Successful registrations: {successfulRegistrationsCount}"

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 registration**.

Output

- Print all **results from each input**, **each on a new line**.
- In the end print the count of successful registrations

Examples

Input	Output	Comment
[3,`U$MichaelU$P@$asdqwe123P@$`, `U$NameU$P@$PasswordP@$`, `U$UserU$P@$ad2P@$`]	Registration was successful Username: Michael, Password: asdqwe123 Invalid username or password Invalid username or password Successful registrations: 1	We have **3 input** lines to **check**. The **first** one **follows** the **rules** and **is valid**. The **second** one **doesn't** because the password doesn't end with a digit. The **third** one is **not** valid because the password is too short.
[2, `U$TommyU$P@$asdqwe123P@$`, `Sara 1232412`,	Registration was successful Username: Tommy, Password: asdqwe123 Invalid username or password Successful registrations: 1	

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