## Balanced Brackets

On the **first line**, you will receive **n** – the number of lines, which will follow. On the next **n** lines, you will receive **one** of the following:

* Opening bracket – “(“,
* Closing bracket – “)” or
* **Random string**

Your task is to find out if the **brackets** are **balanced**. That means after every **closing** bracket should follow an **opening** one. Nested parentheses are **not valid**, and if **two** **consecutive opening brackets** exist, the expression should be marked as **unbalanced**. You should print “BALANCED”, if the parentheses are balanced and “UNBALANCED” otherwise.

### Examples

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Input** | **Output** |  | **Input** | **Output** |
| **8**  (  5 + 10  )  \* 2 +  (  5  )  -12 | BALANCED |  | **6**  12 \*  )  10 + 2 -  (  5 + 10  ) | UNBALANCED |