Password01

Create a program that verifies passwords. Requirements:

- 6-20 characters
- at least one capital letter, one small, one special character, one digit
- the password can not contain consecutive strings of 2 and 3 characters.

Input

Number of passwords.

Passwords.

Output

Check result "YES" if correct "NO" if not.

Example

Input:
8
PASS
P@ss
P@ss123123
Alabama@#1
nonoP@ssw0rd
My2P@SSword
abcddcba123#
MyP@sswordIsReallyLong@RosesAreBlue
 Output:
NO
NO
NO
YES
NO
YES
YES
NO