

Your Validating Credit Card Numbers submission got 40.00 points.

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Problem

Submissions

Leaderboard

Editorial

You and Fredrick are good friends. Yesterday, Fredrick received N credit cards from **ABCD Bank**. He wants to verify whether his credit card numbers are valid or not. You happen to be great at regex so he is asking for your help!

A valid credit card from **ABCD Bank** has the following characteristics:

- ▶ It must start with a **4**, **5** or **6**.
- ▶ It must contain exactly **16** digits.
- ▶ It must only consist of digits (**0-9**).
- ▶ It may have digits in groups of **4**, separated by one hyphen "-".
- ▶ It must NOT use any other separator like ' ', '_', etc.
- ▶ It must NOT have **4** or more consecutive repeated digits.

Examples:

Valid Credit Card Numbers

4253625879615786
4424424424442444
5122-2368-7954-3214

Invalid Credit Card Numbers

42536258796157867	#17 digits in card number → Invalid
4424444424442444	#Consecutive digits are repeating 4 or more times → Invalid
5122-2368-7954 - 3214	#Separators other than '-' are used → Invalid
44244x4424442444	#Contains non digit characters → Invalid
0525362587961578	#Doesn't start with 4, 5 or 6 → Invalid

Input Format

The first line of input contains an integer N .

The next N lines contain credit card numbers.

Constraints

$0 < N < 100$

Output Format

Print 'Valid' if the credit card number is valid. Otherwise, print 'Invalid'. Do not print the quotes.

Sample Input

6
4123456789123456
5123-4567-8912-3456
61234-567-8912-3456
4123356789123456
5133-3367-8912-3456
5123 - 3567 - 8912 - 3456

Sample Output

Valid
Valid
Invalid
Valid
Invalid
Invalid

Explanation

4123456789123456 : **Valid**

5123-4567-8912-3456 : **Valid**

61234-~~567~~-8912-3456 : **Invalid**, because the card number is not divided into equal groups of **4**.

4123356789123456 : **Valid**

51**33-33**67-8912-3456 : **Invalid**, consecutive digits **3333** is repeating **4** times.

5123 — 4567 — 8912 — 3456 : **Invalid**, because space ' ' and – are used as separators.

Change Theme

Language

Python 3



```

1  '''import re
2
3  n=int(input())
4  for i in range(n):
5      u = ''.join(sorted(input()))
6      try:
7          assert re.search(r'[456]', u)
8          assert re.search(r'^\d{4}-\d{4}-\d{4}-\d{4}', u)
9          assert not re.search(r'\s', u)
10
11         assert len(u) == 16
12     except:
13         print('Invalid')
14     else:
15         print('Valid')'''
16
17 import re
18 TESTER = re.compile(
19     r"^"
20     r"(?!.*(\d)(-?\1){3})"
21     r"[456]"
22     r"\d{3}"
23     r"(?:-?\d{4}){3}"
24     r"$")
25 for _ in range(int(input().strip())):
26     print("Valid" if TESTER.search(input().strip()) else "Invalid")
27

```

Line: 26 Col: 68

☒ Upload Code as File

☐ Test against custom input

Run Code

Submit Code

You have earned 40.00 points!

You are now 35 points away from the 4th star for your python badge.

68%

185/220



Congratulations

You solved this challenge. Would you like to challenge your friends?

Next Challenge

Test case 0

Test case 1

Test case 2

Test case 3

Test case 4

Test case 5

Compiler Message

Success

Input (stdin)

Download

```
1 6
2 4123456789123456
3 5123-4567-8912-3456
4 61234-567-8912-3456
5 4123356789123456
6 5133-3367-8912-3456
7 5123 - 3567 - 8912 - 3456
```

Expected Output

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