Inheritance

Lea might die soon. Or not. However, she wants to make sure that in the unlikely event of her death, there are no quarrels over her inheritance. She has named three people her heirs and her inheritance must be equally shared between them. Furthermore, those direct heirs of Lea have 1, 2 and 3 heirs respectively and should one of the direct heirs die, of course his part of the inheritance must again be equally shared between those heirs. Tell Lea whether for her current amount of money this is certainly possible.

Input

The first line of the input contains an integer t. t test cases follow.

Each test case consists of a single line containing an integer n, the amount of money Lea has.

Output

For each test case, print a line containing "Case #i: x" where i is its number, starting at 1, and x is either "yes" if sharing the money equally is possible, or "no" if not. Each line of the output should end with a line break.

Constraints

- $1 \leq t \leq 100$
- $1 \leq n \leq 10^{500}$

Sample Input 1

```
3
12
36
252
```

Sample Output 1

```
Case #1: no
Case #2: yes
Case #3: yes
```

Sample Input 2

```
5
164628
69087
626332
57728
183268643921177320438594398540379208168945539190399241953577295561749327474553690536
```

Sample Output 2

```
Case #1: yes
Case #2: no
Case #3: no
Case #4: no
Case #5: yes
```