

I. Froggie Out!

A frog is at the bottom of m meter well. He need to jump until he escape from the well. Each jump takes 1 hour for 1 meter and he will rest and restoring his energy for another 1 hour after the third jump. While he is resting, he will slips for 1 meter backwards. How many days and hours does he take to escape from the well?

Note: The frog will be out of the well if he reach more than n meter of the well.

Input

First line will be an integer n , which represent the number of cases, followed by n number of m . The value of m must be equal or more than 10 and less than 1000.

Output

Your example output should be in the following format: 2d0h (which d represent days and h represent hours), as shown in the sample below.

Sample Input / Output:

Input	Output
3	
30	2d10h
24	1d22h
15	1d3h