

George Fox University Programming Contest - Sample Program 1 (Easy)

A triangle is one of the basic shapes of geometry: a polygon with three corners or vertices and three sides or edges, which are line segments. A triangle with vertices A, B, and C is denoted $\triangle ABC$. In Euclidean geometry any three points, when non-collinear, determine a unique triangle and a unique plane (i.e. a two-dimensional Euclidean space). Interestingly enough, trees often take the shape of a triangle. Keep planting those trees!

Input

All inputs will come from standard in (console keyboard). The first value represents the number of data sets to follow. Each data set will contain exactly one number between 1 and 10, inclusive. The number states the size of the triangle you are to print.

Output

All output goes to standard out (console window). Print out an appropriately sized triangle for each input. Place an empty line between each triangle.

Example Inputs

```
3
2
5
8
```

Example Output to Screen

```
#
##

#
##
###
####
#####

#
##
###
####
#####
#####
#####
#####
```

George Fox University Programming Contest - Sample Program 2 (Easy)

You are working for the US Government on a very important task—intercepting and decrypting messages. Luckily for you, this cypher is static, meaning it doesn't change. Ever.

Original: "abcdefghijklmnopqrstuvwxyz"

Key: "itechjroxdrvzwayqklubfmsgn"

Input

All inputs will come from standard in (console keyboard). A number $n < 100$ for the number of test cases to follow. For each test case, there will be an encrypted string.

Output

All output goes to standard out (console window). For each test case, print the decrypted string.

Assumptions you can make:

- The cypher doesn't change, ever.
- The cypher is a simple cypher: each letter corresponds to another letter
- Only letters should be decrypted.
- There will only be lowercase letters, spaces, and punctuation

Example Inputs

4

bec qtadr ughnz vhi ftwlx hkcg bec somp jhy

bhl xcdgcb

a shkc dplecgx!

dhhs xbhgp ugh...

Example Output to Screen

the quick brown fox jumps over the lazy dog

top secret

i love cyphers!

cool story bro...

George Fox University Programming Contest - Sample Program 3 (Medium)

Thomas wants to find out how many days there are until Christmas. Help him write a program that can tell him how many days until Christmas on a certain date.

Input

All inputs will come from standard in (console keyboard). The first value is an integer that represents the number of data sets to follow. Each data set will contain a month, date and year each separated by a space.

Output

All output goes to standard out (console window). Your program should produce n lines of output, n representing the number of data sets. Each line should print out the number of days until Christmas formatted as seen below in the sample output.

Assumptions you can make:

- All given dates will be in the same year.
- If the given date occurs after Christmas, then you must find out how many days there are until next year's Christmas.
- If the day occurs on Christmas then the number of days until Christmas is 0.
- Christmas is on December 25th.

Sample Input

```
4
10 8 2002
1 5 2002
6 24 2002
12 26 2002
```

Sample Output

```
78 DAYS UNTIL CHRISTMAS
354 DAYS UNTIL CHRISTMAS
184 DAYS UNTIL CHRISTMAS
364 DAYS UNTIL CHRISTMAS
```