

10430 Dear GOD, Pardon Me

This is the judgment day. All people are standing in front of the GOD. The GOD has the book of deeds for all people. He is calling one after one and punishing them or giving gift according to their deeds on earth. Unfortunately the situation become quiet confusing with the people who have equal number of good deeds and misdeeds, and most of the people are of this kind.

The GOD has taken a policy for this kind of peoples. HE has kept some cards all of them numbered less then 10 in a basket (basket **T**). Another basket (basket **N**) contains cards which are numbered by numbers less then 100. Each people with equal deeds and misdeeds will choose randomly a card from each basket. Then he has to collect some flowers, say X from trees located there (flowers are huge, he can take as many as he want). Then he has to go to the pond of reconciliation. Keeping those flowers beside the pond he has to sink into the pond. When he will come up the number of flowers will be changed to T times the number of flowers that he had before sinking into the pond (the number T is the number written in the card chosen from basket **T**). He must take some flowers, say K from those and dedicate them to the temple nearby. This amount K is fixed by him, but once fixed can't be changed. He is permitted to sink N times, the number chosen from basket **N**. If after N -th sink and dedication to the temple there is no flowers left then he will have to stay X days in the Hell and then he will be shifted to heaven. Otherwise if there is any flower left or the flower was finished before N -th sink he will be thrown to the hell.

You, some how managed to take your pocket computer there. After knowing about the policy, you noticed that you are of the same category of 'equal_good_deeds & equal_bad_deeds'. Now quickly write a program to make sure that you can go to the heaven without staying in the hell for any given T and N .

Input

The input is two integer indicating T and N . Input is terminated by EOF.

Output

Output a line 'Dear GOD, Pardon Me' at first. Then output X and K each in a new line in the format shown below. No invalid input will be present. Print a blank line between two set of output except the last one.

Sample Input

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7 4
3 7
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Sample Output

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Dear GOD, Pardon Me
X = 400
K = 2401

X = 1093
K = 2187
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