Frogs On Lily Leaves

Time: 5s

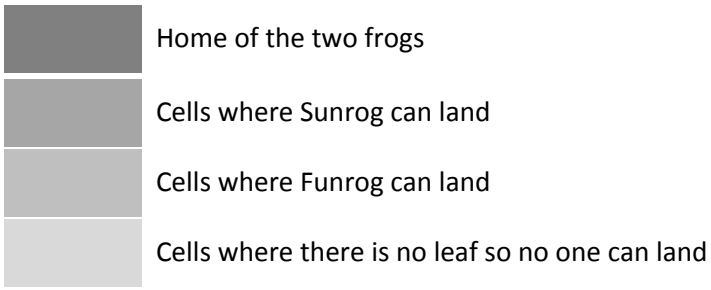
This is about a newly married frog couple **Sunrog** & **Funrog**. After their marriage, they have been living in an infinitely long river. The river can be thought of as cells of a 1D array starting at index 0. Index 0 is the home of those two frogs.

One weird hobby of the two frogs is collecting lily flower seeds every day and storing them. So every night they each plant a lily seed and the next morning the plants grow leaves and lives only for the day. There is a leaf on every $\mathbf{A}^{th}$ cell from Funrogs plant and she can land only on those cells. Similarly there is a leaf on every $\mathbf{B}^{th}$ cell from Sunrogs plant and he can land only on them. For example, if **A** = 2 then Funrog can only land on 2, 4, 6, … and so on.

The cells where anyone of Sunrog or Funrog can land is considered to be **Rogland** (index 0 is their home so it's not a Rogland). Each day there is only one lily flower which is at $\mathbf{C}^{th}$ Rogland. The flower contains infinite number of capsules. The number of seeds in every capsule is equal to the index of the cell at which the flower is. For example if the lily flower is at 5^{th} cell of the river, then each capsule of the flower will contain 5 seeds.

In a typical day, the leaves of Funrog's plant grow at every $\mathbf{A}^{th}$ cell and Sunrog's ones at every $\mathbf{B}^{th}$ cell. The lily flower is at $\mathbf{C}^{th}$ Rogland from where they collect the capsules and store the seeds of one capsule in one cell at every of **A** to $\mathbf{B}^{th}$ index.

If A = 2, B = 3, C = 4



Roglands are 2, 3, 4, 6, 8, 9 ...
C = 4, 6 is the 4^{th} Rogland. So the flower is at 6^{th} cell and all the capsule of the flower coitains 6 seeds each.

You are given **N** and **D** and you need to find the total number of seeds they stored in each cell from 1 to **N** after **D** days. For each of the **D** days, the value of **A B C** are given.

Input:
There is only one test case. At the first line, two space-separated numbers **N** (1 <= **N** <= 10^5) and **D** (1 <= **D** <= 10^5) are given. The following **D** lines contain three space-separated numbers **A**, **B** (1 <= **A** <= **B** <= 10^5) and **C** (1 <= **C** <= 10^9) respectively.

Output:
A single line containing N space-separated numbers representing the number of stored seeds modulo **10^9+7** from 1 to **N**th cell in the river.

Sample Input:
5 2
1 5 3
2 3 4

Sample Output:
3 9 9 3 3

Explaination:
N = 5 and D = 2, we need to print the number of seeds from 1 to 5th cell of the river and information for two days are given.
First day, A = 1, B = 5, C = 3. So the flower is at 3th cell index (as the 3rd Rogland is cell index 3). Every capsule contains 3 seeds and all the cells from 1 to 5 gets 3 seeds each.
Similarly, on the second day, A = 2, B = 3, C = 4. The flower is at cell index 6 as 2, 3, 4, 6, 8 etc are Roglands and 4th Rogland is at 6th cell index. So 6 more seeds are stored on cells 2 to 3 indexes.