Problem E: Fireworks

On New Year’s Eve, the city of Toronto hosts a fireworks show. The show lasts **N** seconds, over the course of which **M** fireworks are used. Each firework goes off at a certain time **A**, hangs in the air for **L** seconds, and has a brightness of **B**. That means that between time **A** and **A+L-1** (inclusive), the brightness of the sky increases by **B**.

Given **A, L,** and **B** for each firework, figure out at which point in time is the sky the brightest.

**Input:**

The first line of the input provides the number of test cases, **T** (1 ≤ **T** ≤ 100). **T** test cases follow. Each test case begins with two integers **N** (1 ≤ **N** ≤ 107) and **M** (1 ≤ **M** ≤ 104). **M** lines follow, each containing three integers **A, L,** and **B**.

(1 ≤ **A, L** ≤ 107, 1 ≤ **B** ≤ 1000)

**Output:**

For each test case, your program should output one integer: the time at which the sky is the brightest. If there are multiple points in time at which the sky is brightest, output the time of the last one.

**Sample Input:**

2

5 3

1 1 3

2 4 1

3 2 1

10 3

1 4 3

4 4 4

7 4 5

**Sample Output:**

1

7

**Explanation of Sample Input**

In the second test case, the brightness of the sky, starting at t = 1 second, is {3, 3, 3, 7, 4, 4, 9, 5, 5, 5}, so the sky is brightest in the 7th second.