Lec-59

21/11/24 10:29 AM

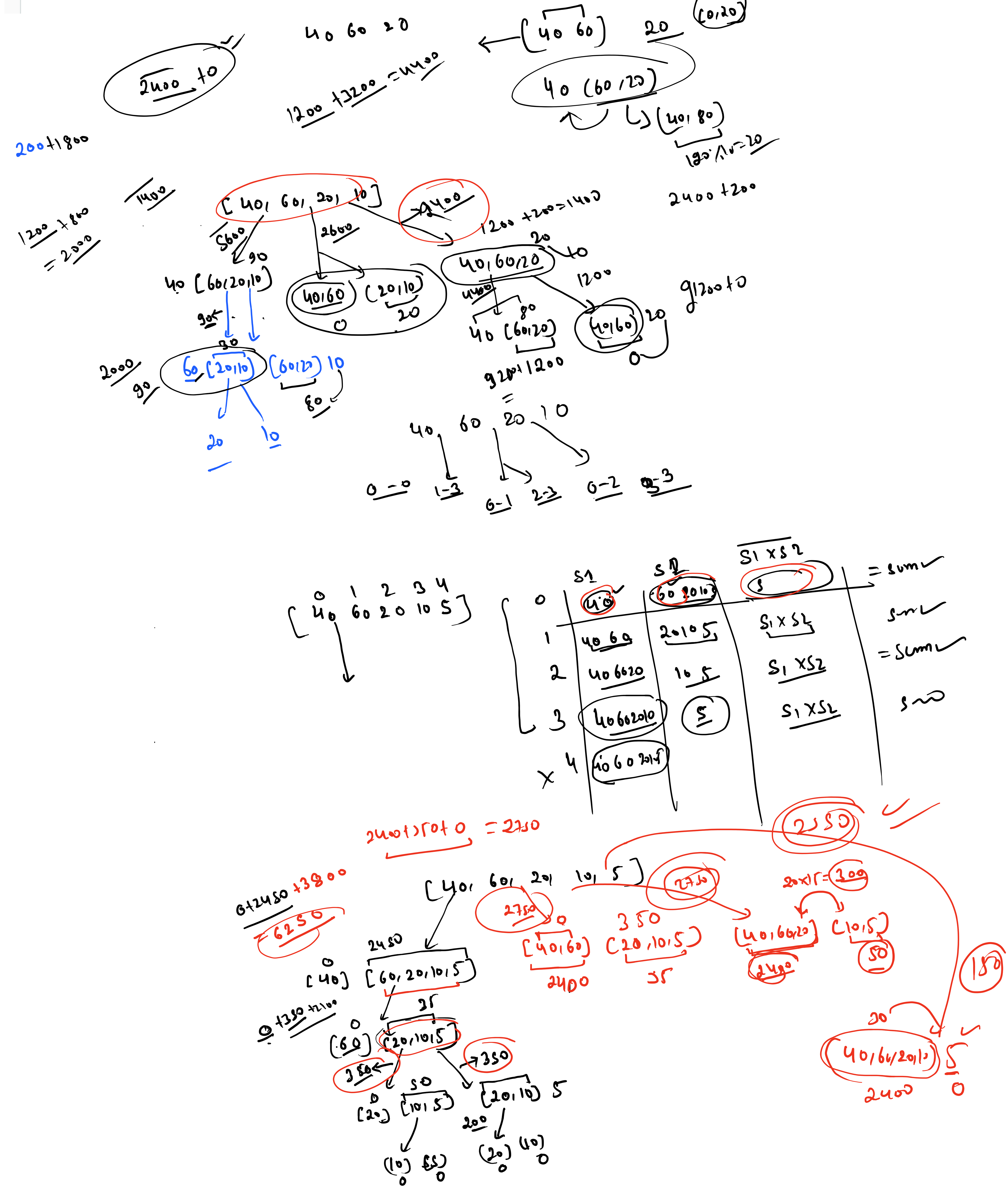
Harry Potter has n mixtures in front of him, arranged in a row. Each mixture has one of 100 different colors (colors have numbers from 0 to 99).

He wants to mix all these mixtures together. At each step, he is going to take two mixtures that stand next to each other and mix them together, and put the resulting mixture in their place.

When mixing two mixtures of colors a and b, the resulting mixture will have the color (a+b) mod 100.

Also, there will be some smoke in the process. The amount of smoke generated when mixing two mixtures of colors a and b is a*b.

Find out what is the minimum amount of smoke that Harry can get when mixing all the mixtures together.



You are given `k` identical eggs and you have access to a building with `n` floors labeled from `1` to `n`.

You know that there exists a floor `f` where `0 <= f <= n` such that any egg dropped at a floor **higher** than `f` will **break**, and any egg dropped **at or below** floor `f` will **not break**.

Each move, you may take an unbroken egg and drop it from any floor `x` (where `1 <= x <= n`). If the egg breaks, you can no longer use it. However, if the egg does not break, you may **reuse** it in future moves.

Return *the* ***minimum number of moves*** *that you need to determine* ***with certainty*** *what the value of* `f` is.