

Software company Arcurve has just won the rights to be the exclusive coders of Project X. Project X is highly sophisticated and will require specialized training for several of Arcurve's employees. Arcurve has calculated that a certified programmer produces 200 lines of code per day, and a non-certified programmer produces 40 lines of codes per day. Arcurve has E employees, only one of which is certified at the onset of Project X.

One certified programmer can train one non-certified programmer over a 4 day intense peer-to-peer course, during which neither of them can code on the project, nor train others. After the 4 day course, both are certified and can resume coding on Project X. A certified programmer who is not already training a non-certified programmer may at any point start training a non-certified programmer.



Will Arcurve succeed in completing Project X before the big deadline D days out?

Input

The first line of the input contains an integer T ($1 \leq T \leq 2100$), the number of test cases. Each test case contains three integers: D ($1 \leq D \leq 10^8$), E ($1 \leq E \leq 10^8$) and L ($1 \leq L \leq 10^{18}$) denoting the number of days before Project X is due, the number of employees Arcurve has (one of which is certified) and the number of lines of code that must be produced, respectively.

Output

For each test case print on a separate line either 'Yes' or 'No', the answer to the question "Can Arcurve produce L lines of code within D days with its E employees?"

Sample Input

```
2
12 4 4000
12 4 5000
```

Sample Output

```
Yes
No
```