

Artificium

The Wolves

Runtime Limit – 3s

Problem Statement

In a magic forest, there is flock of sheep and a pack of wolves

At the beginning, the **total number of sheep** is always 4 times the **total number of wolves** (both gray and black combined). Wolves have different eating habits:

Gray Wolves: Each gray wolf eats 2 sheep per day

Black Wolves: Each black wolf eats 3 sheep per day

If **more than** 10 sheep after a day of hunting, the number of wolves will **double** the next day

You need to find :

- the **total number of sheep** in the flock before wolf's hunting
- the **number of sheep remaining** after a day of hunting
- if the number of wolves will double the next day Yes or No

Format

Input

Line 1: Two space-separated integers *grayWolves* and *blackWolves* for the number of gray wolves and black wolves at the beginning respectively.

Output

Line 1: Three space-separated integers/strings:

Total number of sheep in the flock before hunting

Number of sheep remaining after a day of hunting

Indication if the **wolves** will **double** in number the next day Yes or No

Constraints

$1 \leq \textit{grayWolves} \leq 10000$

$1 \leq \textit{blackWolves} \leq 10000$

Sample

Input

2 1

Output

12 5 No