

SHINJI, EVA NI NORE!!!



In 2015, fifteen years after a global cataclysm known as the Second Impact, teenager Shinji Ikari is summoned to the futuristic city of Tokyo-3 by his estranged father, Gendo Ikari, the director of the special paramilitary force Nerv. Shinji witnesses the United Nations forces battling an Angel, one of a race of giant monstrous beings whose awakening was foretold by the Dead Sea Scrolls. Due to the Angels' near-impenetrable force-fields, Nerv's giant Evangelion bio-machines, synchronized to the nervous systems of their pilots and possessing their own force-fields, are the only weapons capable of preventing the Angels from annihilating humanity. Nerv officer Misato Katsuragi escorts Shinji into the Nerv complex beneath the city, where his father pressures him into piloting the Evangelion Unit-01 against the Angel. Without training, Shinji is quickly overwhelmed in the battle, causing the Evangelion to go berserk and savagely kill the Angel on its own.

Afraid of losing control again, the Nerv engineering team wants to reinforce the force-fields that protect the Eva, also known as the "A.T. Field," to improve its self-defense capabilities and reduce the chances of it going into berserk mode again. To achieve this, the engineers first need to determine the structure of the A.T. Field. Fortunately, the structure of the field is relatively simple; it resembles a tree-like structure. As the head of the IT team at Nerv, I will assist the engineering team in identifying which nodes need to be reinforced.

Input Format

- N numbers of number

Constraints

$$0 \leq N \leq \infty$$
$$1 \leq \textit{number} < 2^{31}$$

Output Format

Series of nodes needs to be reinforced

Sample Input 1

```
1
3
2
6
5
4
7
```

Sample Output 1

```
1
3
6
7
4
```

Explanation

