

Medical Examinations in Hospital

For a period of time that is determined in the input, every day patients come in a hospital for medical examination and treatment. Firstly, only **7 doctors** are taking care for patients. But each of them can examine and treat only **1 patient per a day**. **All the rest patients** have to be sent to other hospitals.

Every third day the hospital makes calculations, and **if the number of patients who have not been examined and treated is greater than the number of patients who has been examined and treated, another doctor** is appointed. As appointment takes place before the patients intake begins for the day

Write a program that calculates the number of the **treated patients** and the number of the **untreated ones** for the **given period**.

Input

- On the **first line** – **period** for which the calculations should be done; an integer in range [1 ... 1000].
- On the **next few lines** (their number is equal to **the number of the days**) – **number of the patients** that have come for examination and treatment every day; an integer in range [0 ... 10 000].

Output

- On the **first line**: “Treated patients: {the number of examined and teated patients}.”
- On the **second line**: “Untreated patients: {the number of unexamined and untreated patients}.”