

VII BXComp

7º Campeonato de Programação para Calouros do Curso de Sistemas de Informação 2017

Etapa 6 – Desafio 2

Water Tank

Jorge works in a company that makes water tanks. One day, a client asked how many days were necessary to fill a water tank. Every day, the water tank is filled with an amount of water and it empties another amount because of the consumption. During the weekend, the water consumption is twice the usual, however, the water tank is filled with the same amount. For this task, Jorge hired an Information System student to help him.

Task

Your job is to find out how many days are necessary to fill one water tank with capacity **N**, considering that the water tank gets **X** liters of water every day and empties **Y** liters on weekdays (remember that on weekends the consumption is **2*Y**). **Y** corresponds to the total consumption of water on any given weekday.

Input

The input is composed of a set of test cases, in which the first line contains a positive integer **T**, such that $1 \leq T \leq 100$, indicating the number of test cases to be considered. Each one of the **T** test cases will consist of a line with four integers: **D**, **N**, **X**, **Y**, separated by a single blank space. Such numbers represent, respectively, the day of the week that the water tank began to being used (0 to Monday, 1 to Tuesday, 2 to Wednesday, 3 to Thursday and so forth), the total capacity of the water tank (in liters), the volume of the water that the water tank is filled every day and the volume of the water that is consumed.

Output

For each test case, the output consists of an integer indicating the number of days necessary to fill the water tank and the day of the week that the water tank will be filled, separated by a hyphen without blank spaces. If the water tank never gets completely filled or if the consumption is greater than the current volume of water

available, print out “The water tank could not be filled”. Please note that the day the tank will be completely filled means that the tank had to be full before any amount of water was added.

Input Sample

```
3
0 50 1 2
0 50 2 1
1 100 32 2
```

Output Sample

```
The water tank could not be filled
Days: 68-5
Days: 4-5
```