

## Problem G: The Total is Right

Time limit: 5 seconds

*The total is right* is a popular TV game that has been broadcast in many countries. The goal of the game is to reach a chosen number  $N$  using the four arithmetic operations  $(+, -, \times, \div)$  and six given integer numbers  $m_i$  for  $1 \leq i \leq 6$ . All the intermediate numbers must be positive and any division must be exact (for example, it is not possible to divide 5 by 2). The input numbers  $m_i$  as well as all intermediate numbers can be used at most once, but you are not required to use all input numbers.

For instance, suppose  $N = 888$  and  $m_1 = 100$ ,  $m_2 = 6$ ,  $m_3 = 75$ ,  $m_4 = 3$ ,  $m_5 = 1$ , and  $m_6 = 6$ . We can then obtain  $N = 888$  by computing

$$\begin{array}{ll} 75 - 1 = 74 & \text{(using } m_3/m_5) \\ 6 + 6 = 12 & \text{(using } m_2/m_6) \end{array}$$

and finally

$$74 \times 12 = 888. \quad \text{(using } m_3/m_5 \text{ and } m_2/m_6 \text{ respectively)}$$

Hence, in that example, the total is right!

### Input

The input file consists of multiple test cases. The first line of the input file consists of a single integer indicating the number of test cases. Each test case follows, and consists of one single line that consists of seven integers  $N$ ,  $m_1$ ,  $m_2$ ,  $m_3$ ,  $m_4$ ,  $m_5$ , and  $m_6$ , each separated by a single space. The integer  $101 \leq N \leq 999$  is the number that must be reached, and the integers  $m_i$  are the numbers that can be used to reach  $N$ : for each  $1 \leq i \leq 6$ , we have  $m_i \in \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 25, 50, 75, 100\}$ .

### Output

For each test case in the input, your program should print one line consisting of the string **The total is right** (followed by a newline) or of the string **Impossible** (followed by a newline), depending on whether or not it is possible to obtain exactly  $N$  using some or all of the numbers  $m_i$  for  $1 \leq i \leq 6$  according to the rules of the game. There should not be any blank lines in your output.

### Sample Input

```
2
888 100 6 75 3 1 6
449 2 6 100 10 2 8
```

### Sample Output

```
The total is right
Impossible
```