Project Euler #19: Counting Sundays

Problem Statement

This problem is a programming version of Problem 19 from projecteuler.net

You are given the following information, but you may prefer to do some research for yourself.

- 1 Jan 1900 was a Monday.
- Thirty days has September,
  April, June and November. All the rest have thirty-one,
  Saving February alone,
  Which has twenty-eight, rain or shine. And on leap years, twenty-nine.

A leap year occurs on any year evenly divisible by 4, but not on a century unless it is divisible by 400.

How many Sundays fell on the first of the month between two dates(both inclusive)?

Input Format

The first line contains an integer T , i.e., number of test cases.
Each testcase will contain two lines
Y1 M1 D1 on first line denoting starting date
Y2 M2 D2 on second line denoting ending date.

Output Format

Print the values corresponding to each test case.

Constraints

$1 \leq T \leq 100$
$1900 \leq Y1 \leq 10^{16}$
$Y1 \leq Y2 \leq (Y1 + 1000)$
$1 \leq M1, M2 \leq 12$
$1 \leq D1, D2 \leq 31$

Sample Input

```
2
1900 1 1
1910 1 1
2000 1 1
2020 1 1
```

Sample Output

```
18
35
```