11 Spring break! Yahoo!
4 points

Introduction

Easter Sunday is a holiday corresponding to the first Sunday after the first full Moon of the spring. This makes it change from year to year, as you know.

In 1800 the mathematician Carl Friedrich Gauss presented an algorithm to calculate the date of the Gregorian Easter and made corrections until his final proposal in 1816.

Below:

> `:=` indicates assignment.
>
> `div` indicates integer division.
>
> `mod` indicates the remainder of the integer division.

Y is the year, M the month and D the day of the Easter Sunday of the given year.

- Compute the following numbers:
  ```
  k := Y div 100
  x := Y mod 19
  b := Y mod 4
  c := Y mod 7
  q := k div 4
  p := (13  + 8k) div 25
  y := (15 – p + k – q) mod 30
  z := (19x + y) mod 30
  n := (4 + k – q) mod 7
  e := (2b + 4c + 6z +n) mod 7
  ```
- If $z + e \leq 9$, then `D := 22 + z + e` and `M := 3`.
- Otherwise, if $z = 29$ and $e = 6$, then `D := 19` and `M := 4`.
- Otherwise, if $z=28$ and $e = 6$ and $x > 10$, then `D := 18` and `M := 4`.
- Otherwise, `D := z + e – 9` and `M := 4`.

Write a program to compute the day, month and year (D/M/Y) of the Easter Sunday of every year between the two given in the input.

Input

Two years
2010
2016

Output

The list of Easter Sundays between those two years, including them.
4/4/2010
24/4/2011
8/4/2012
31/3/2013
20/4/2014
5/4/2015
27/3/2016