
Easter Sundays

P35547_en

Easter Sunday is a mobile holiday corresponding to the first Sunday after the first full moon of the spring. Write a program to compute the day D and the month M of the Easter Sunday of every given year Y .

Below, $:=$ indicates assignment, div indicates integer division, and mod indicates the remainder of the integer division. To solve this problem, use the Gauss method:

- Compute
 1. $k := Y \text{ div } 100$
 2. $x := Y \text{ mod } 19$
 3. $b := Y \text{ mod } 4$
 4. $c := Y \text{ mod } 7$
 5. $q := k \text{ div } 4$
 6. $p := (13 + 8k) \text{ div } 25$
 7. $y := (15 - p + k - q) \text{ mod } 30$
 8. $z := (19x + y) \text{ mod } 30$
 9. $n := (4 + k - q) \text{ mod } 7$
 10. $e := (2b + 4c + 6z + n) \text{ mod } 7$
- 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 $M := 4$.

Input

Input consists of several natural numbers between 1800 and 9999.

Output

Print the day and the month of the Easter Sunday of each year.

Sample input

2006
1999

Sample output

16/4
4/4

Problem information

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