



Name _____

Teacher/Hour _____

SIDE QUEST Easter Hunt

Write a program that takes the year and finds the date (month and day) of Easter for that year.

A convenient algorithm for determining the date of Easter in a given year was devised in 1876 and first appeared in Butcher's Ecclesiastical Handbook. This algorithm holds for any year in the Gregorian calendar, which means years including and after 1583. Subject to minor adaptations, the algorithm is as follows:

1. Let y be the year (such as 1583 or 2003).
2. Divide y by 19 and call the remainder a . Ignore the quotient.
3. Divide y by 100 and get a quotient b and a remainder c .
4. Divide b by 4 and get a quotient d and a remainder e .
5. Divide $b + 8$ by 25 and get a quotient f . Ignore the remainder.
6. Divide $b - f + 1$ by 3 and get a quotient g . Ignore the remainder.
7. Divide $19 * a + b - d - g + 15$ by 30 and get a remainder h . Ignore the quotient.
8. Divide c by 4 and get a quotient i and a remainder k .
9. Divide $32 + 2 * e + 2 * i - h - k$ by 7 and get a remainder r . Ignore the quotient.
10. Divide $a + 11 * h + 22 * r$ by 451 and get a quotient m . Ignore the remainder.
11. Divide $h + r - 7 * m + 114$ by 31 and get a quotient n and a remainder p .

The value of n gives the month (3 for March and 4 for April) and the value of $p + 1$ gives the day of the month.

Print out the code and the form when you turn it in.