

# Zeller's Algorithm

Do you know on what day of the week you were born?

Zeller's Algorithm is a way to calculate what day of the week a given date was.

## Zeller's Algorithm

Let day number = D

month number = M

year = Y

If M is 1 or 2, add 12 to M, and subtract 1 from Y.

Let C be the first two digits of Y and K be the last two digits of Y.

Add together the integer parts of  $(2.6M - 5.39)$ ,  $(K/4)$  and  $(C/4)$ . Add to this D and K, and subtract  $2C$ . (The integer part of a number is the whole number part: integer part of 2.3 is 2, and of 6.7 is 6. Note that the integer part of  $-1.7$  is  $-2$ ).

Find the remainder when this number is divided by 7.

If this remainder is 0 the day is Sunday, 1 is Monday, 2 is Tuesday, etc.

## Example: 15 May 1991

D = 15

M = 5

Y = 1991

C = 19

K = 91

$(2.6M - 5.39) = 7.61 = 7$

$(K/4) = 22.75 = 22$

$(C/4) = 4.75 = 4$

$7 + 22 + 4 + 15 + 91 - 38 = 101$

$101 \div 7 = 14 \text{ r } 3$

Remainder is 3, so 15 May 1991 was a Wednesday.

Use the algorithm to calculate the day of the week on which you were born.

Write an Excel spread sheet to implement the algorithm for any date.