

Easter day

In 1800, Carl Friedrich Gauss, the German mathematician, produces formulas to calculate the date of Easter day. Here is a simplified method, valid from year 1900 to year 2099 of the Gregorian calendar. Write down and fill in the grid step by step.

- Choose a year and name it **A**.
- **R** is the rest of the Euclidian division of **A** by 4.
- **S** is the rest of the Euclidian division of **A** by 7.
- **T** is the rest of the Euclidian division of **A** by 19.
- $B = (19 \times T) + 24$
- **M** is the rest of the Euclidian division of **B** by 30.
- $C = (2 \times R) + (4 \times S) + (6 \times M) + 5$
- **N** is the rest of the Euclidian division of **C** by 7.
- $P = M + N$.

A	R	S	T	B	N	C	M	P

If $P < 10$, then Easter day will be on the $(P + 22)$ of March.

If $P > 9$, then Easter day will be on the $(P - 9)$ of April.

When will Easter day fall in year **A** chosen before ? (2012 ? 2013 ?/2014 ?)

Birthday

This method will help you find the weekday on which a preselected date falls.

Write down and fill in the grid step by step.

- **A** is the year when you were born.
- **D** is the difference between **A** and 1901.
- **Q** is the full quotient of the Euclidian division of **D** by 4.
- **N** is the number of days between January 1st and the end of the month preceding your month of birth.
- **J** is the date of your birthday.
- $S = D + Q + N + J + 1$
- **R** is the rest of the Euclidian division of **S** by 7.

A	D	Q	N	J	S	R

You will find the result in the following grid. (20 March 1975 ? Your birthday ?)

If R is...	0	1	2	3	4	5	6
The weekday is...	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday