DNL MATH

EASTER DAY

WEEKDAY

BIRTHDATE

AGE

NAME : …

CLASS : …

DATE : …

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 x **T**) + 24
- **M** is the rest of the Euclidian division of **B** by 30.
- **C** = (2 x **R**) + (4 x **S**) + (6 x **M**) + 5
- **N** is the rest of the Euclidian division of **C** by 7.
- **P** = **M** + **N**.

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 **2014** ?

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A	R	S	T	B	M	C	N	P

When will Easter day fall in year **2015** ?

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A	R	S	T	B	M	C	N	P

Weekday

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.
- **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 the date.
- **J** is the date.
- **S** = **D** + **Q** + **N** + **J** + 1
- **R** is the rest of the Euclidian division of **S** by 7.

You will find the result in the following grid.

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

Find the weekday of this date : **24 june 2013**

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A	**D**	**Q**	**N**	**J**	**S**	**R**

Find the weekday of this date : **25 december 2013**

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A	**D**	**Q**	**N**	**J**	**S**	**R**

Your teacher's Birthdate

"You are going to guess my birthdate !

I will have to calculate the following so as to give you a clue :

- Multiply the day when I was born by 12,
- Then multiply the month by 37,
- Finally add both totals and give you the result **R**."

I give you the clue :

The result is R = 351

Write down and fill in the grid step by step.

- **M** (month) is the rest of Euclidian division of **R** by 12,
- **S** = **R** – 37 x **M**
- **D** (day) is the full quotient of the Euclidian division of **S** by 12.

Your teacher's birthdate is (day/month only) :

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R	M	S	D

How old is your teacher ?

"You are going to guess my age !

I will have to calculate the following so as to give you a clue :

I give you the clue :

The result is R = 353

- Pick a number from 1 to 9.
- Multiply this number by 9.
- Subtract this last result to 10 times your age and give me your result **R**."

Write down and fill in the grid step by step.

- **U** is the unit digit of number **R**.
- **D** is the number of tens of number **R**.
- **A = U + D**.

How old is your teacher ?

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…….

R	U	D	A