

Your Birthdate

“I am going to guess your birthdate !

You will have to calculate the following so as to give me a clue :

- Multiply the day when you were born by 12,
- Then multiply the month by 37,
- Finally add both totals and give me your result **R**.”

Write down and fill in the grid step by step.

- **M** is the rest of Euclidian division of **R** by 12
- **S** = $R - 37 \times M$
- **J** is the full quotient of the Euclidian division of **D** by 12.

R	M	S	J

How old are you ?

“I am going to guess your age !

You will have to calculate the following so as to give me a clue :

- You are going to 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** = $U + D$.

R	U	D	A

Something strange ?

Take a three digit number. Make the six digit number **N** by writing your three digit number twice. For example for 637, **N** is 637637.

Divide **N** by 13, divide the quotient that gives you by 11, and divide the new quotient by 7.

Try few times. What do you notice ?

Could you justify your conjecture ?

