

« Everyday life as a result of historical events : Bytes and codes »

What learning session did you participate in? (Please tick)

« Bytes only » (Molière) Teacher led lesson (Camus) Blended lesson (Zola)

1. What is the difference between a byte and a bit ?

- A. « Byte » is an american word ; « Bit » is an english one.
- B. 8 bits are one byte
- C. 1024 bits are one byte
- D. There is no difference.

2. An octet is made of 8 spaces in which 0 and 1 can be set.
How many different octets can be then written ?



- A. 8
- B. $2 \times 8 = 16$
- C. $8^2 = 64$
- D. $2^8 = 256$

3. Who used the word « bit » first ?

- A. Alan Turing
- B. Mark Zuckerberg
- C. Claude Shannon and John Tukey
- D. Bill Gates

4. Why did Leibniz want to write numbers with only two digits : 1 and 0 ?

- A. He wanted to work with computers.
- B. He didn't understand what is the digit 2.
- C. He had only two fingers.
- D. He wanted to avoid human errors.

5. 7 is the following decimal number of 6.

101 is the following binary number of 100.

What is the following binary number of 1011 ?

- A. 1100
- B. 10110
- C. 10111
- D. 1012

6. The addition of the two binary numbers 10110 and 10101 is the binary number

- A. 10011
- B. 101011
- C. 20211
- D. 100011

7. The International Standard Book Number (ISBN) is a unique numeric commercial book identifier.

The ISBN is 13 digits long if assigned on or after 1st January 2007.

How to check the code :

The ISBN code is made of 13 dixits : $a_1 a_2 a_3 a_4 a_5 a_6 a_7 a_8 a_9 a_{10} a_{11} a_{12} a_{13}$

$$S = a_1 + 3 a_2 + a_3 + 3 a_4 + a_5 + 3 a_6 + a_7 + 3 a_8 + a_9 + 3 a_{10} + a_{11} + 3 a_{12} + a_{13}$$

The code is right if S is a multiple of 10.

On the ISBN below, we can read $a_1 = 4$, $a_2 = 5$, $a_3 = 7$...but not the check digit a_{13}



What is the check digit a_{13} to make the code right ?

- A. 2
- B. 4
- C. 7
- D. 9

8. One Peta octet (Po) is approximatley equal to

- A. 1 000 000 Tera octet
- B. 1 000 000 Mega octet
- C. 1 000 000 Kilo octet
- D. 1 000 000 Giga octet

