## Contest: Hexa

July 1, 2022 - September 21, 2022 11:59pm ET Participants: 6<br>Test Designer: James Dorsey

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## Contest Information

Cheating: Do not discuss answers/hints. No time limit. Two attempts and reference aids are allowed. No penalty for guesses/wrong answers. Неха
Each answer is a unique hexadecimal; therefore, each hexadecimal is only used once throughout the test.
Only requires Addition, Subtraction, Multiplication, Division, and pattern recognition
Examples (answers in bold): $10,20,30,40,50, ? 60 \quad 12345 ? ? 67$

1. ? 123456789 ABCDEF
2. 13579 BD ?
3. ?CA86420
4. $85342,613,3$ ?
5. $6 \mathrm{~F} 4 \mathrm{~A} ? \mathrm{C} 0 \mathrm{E} 6$
6. $0, \mathrm{D}, 3, \mathrm{D}, ?, \mathrm{H}, 2, \mathrm{~F}$ (May not be as easy as 123 ; this item requires your undivided attention)
7. $0,6,6, ?, 7,1,6,8,1,4$ (Figuring out the previous item will help...45678; requires your undivided attention)
8. $13,5,1,5,24,8, ?, 4,3,12,1$

When arranged properly, these numbers form a non-mathematical sequence.
Once all 11 numbers have been found and put into the correct order, they reveal something that is quite key to this test. Find the missing number and state what the ordered sequence is about with only one 11 -letter word.
To receive full credit (1 raw point), the sequence and the word must be correctly answered.
No partial credit will be given. Use this format when answering: number word; for example, 10 coffee
9. 2 Pz 4 Hy 8 Dx 16 ?w32Av
10. F, EF, DEF, CDFE, B?FED, ABFEDC
11. 1D2C, C1D2, 2C1?, D2C1

After solving this sequence, read the following statement and write TRUE to agree or FALSE to disagree: This sequence is not logically complete: every unique element has not been found and the sequence can continue. To receive full credit (1 raw point), the sequence and the TRUE/FALSE statement must be correctly answered. No partial credit will be given.
12. @ @ @^@^@@@, 2|BD, @ @^@@@^@ @, 4|B?, @^@@@@@^@, 6|AF, ^@ @ @ @ @ @ @

Calculations are not required to solve the four remaining items that are grouped together:
13. 25_15_21 8_1_22_?
14. 3_15_13_1?_12_5_20_5_4
15. 20_?_9_19
16. 1?_21_13_5_18_9_3_1_12 20_5_19_20.

Final Scoreboard (September 21, 2022)

| Ranking | Name | Country | $\mathbf{1}^{\text {st }}$ Attempt | $\mathbf{2}^{\text {nd }}$ <br> Attempt | Mean <br> Score | Prize |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Winners | Tiberiu Sammak <br> Victor Balacescu <br> Jim Lorrimore | Romania <br> Romania <br> England | 16 (perfect <br> score) | N/A | 16 | Free test submission and free society membership <br> until October $31,2022$. |
| $\mathbf{2}^{\text {nd }} \boldsymbol{P l a c e}$ | Nobuo Yamashita <br> Andrew Hayles | Japan <br> USA | 13 | N/A | 13 | Free test submission until October $15,2022$. |
| $\mathbf{3}^{\text {rd } \boldsymbol{P l a c e}}$ | Hidden | Hidden | 4 | N/A | 4 | $1 / 2$-off test submission until September $30,2022$. |

