# Contest: Symbols in Interesting Questions (SYMBOLIQ) April 1, 2024 - June 19, 2024 11:59pm ET Participants: 9 

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.

## Symbols in Interesting Questions (SYMBOLIQ)

Observe the rotation and symmetry of the letters/numbers/symbols; for the solutions, use your keyboard - no drawing or software required!
I. Series

1. Complete the series:

* 00 *** 000 ?

2. Complete the series:
. ?
3. Complete the series:
/X\}
X
/X

?

## II. Matrices

4. Find the missing element in this matrix:

| 0 | $\Lambda$ | $?$ |
| :--- | :--- | :--- |
| $\dot{\Lambda}$ | 0 | $\hat{}$ |

5. Find the missing row in this matrix:
!!11!!11
11!!11!!
?
11!!11!!
6. Find the missing element in this matrix:

| $\$$ | $\sim \sim$ | $!!!$ |
| :--- | :--- | :--- |
| $!!$ | $\$ \$ \$$ | $\sim$ |
| $\sim \sim$ | $?$ | $\$ \$$ |

## III. Analogies

7. Complete the analogy:
$6: 9:: p$ : ?
8. Complete the analogy:
$<$ : > : ] : ?
9. Complete the analogy:
$\mathrm{O}: \mathrm{Q}:: \mathrm{P}$ : ?
IV. Odd-One-Out
10. Select the letter $(\mathrm{A}, \mathrm{B}$, or C$)$ of the item that is different from the others:
$\begin{array}{lll}C & \text { U } & \hat{C} \\ \text { A } & \text { B } & \text { C }\end{array}$
11. Select the letter (A, B, C, or D) of the item that is different from the others:

| I | N | Z | U |
| :--- | :--- | :--- | :--- |
| A | B | C | D |

12. Select the letter $(A, B, C, D$, or $E)$ of the item that is different from the others:

| 1 | - | $/$ | I | $O$ |
| :--- | :--- | :--- | :--- | :--- |
| $A$ | $B$ | $C$ | $D$ | $E$ |

## V. Problem Solving

Find where the missing line needs to be in order to complete the pattern for item 13 (which is highlighted in yellow)


Write coordinates going from left to right or top (corner) to bottom (corner). The missing line could be vertical, horizontal, or diagonal (each diagonal line is to be viewed as one continuous line connecting one corner of the bolded square to the other corner.

For example, imagine the following scenarios of missing lines for the smallest square in the example (Ex):

- If only the bottom horizontal line is missing, complete it with: $\operatorname{Left}(X, Y)=(1,2.5)$ and $\operatorname{Right}(X, Y)=(1.5,2.5)$
- If only the right vertical line is missing, complete it with: $\operatorname{Top}(\mathrm{X}, \mathrm{Y})=(1.5,3)$ and Bottom $(\mathrm{X}, \mathrm{Y})=(1.5,2.5)$
- If only the $\backslash$ diagonal (top left to bottom right) is missing, complete it with: Top corner $(\mathrm{X}, \mathrm{Y})=(1,3)$ and Bottom corner $(\mathrm{X}, \mathrm{Y})=(1.5,2.5)$
- If only the / diagonal (top right to bottom left) is missing, complete it with: Top corner $(\mathrm{X}, \mathrm{Y})=(1.5,3)$ and Bottom corner $(\mathrm{X}, \mathrm{Y})=(1,2.5)$

Please review the above examples before attempting item 13 to understand the correct format for answering it.
13. Write the coordinates for item 13 going from left to right or top (corner) to bottom (corner) in the correct format:

Left or Top (corner) $(\mathrm{X}, \mathrm{Y})=(?, ?)$ and Right or Bottom (corner) $(\mathrm{X}, \mathrm{Y})=(?, ?)$
14. For this item, there are 5 of 6 external sides of a solid object shown; find the sixth external side from the multiple-choice options.


Write the letter that corresponds to the sixth external side for item 14. Multiple-choice options (A-T):

15. For this item, a circle has no sides. Not including this item, the number of correct answers minus the number of sides of a circle is: ?

Final Scoreboard (June 19, 2024)

| Ranking | Name | Country | $\mathbf{1}^{\text {st }}$ Attempt | $2^{\text {nd }}$ <br> Attempt | Mean <br> Score | Prize |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Winner | Lukáš Puškáš <br> Jim Lorrimore <br> Susumu Ota <br> Harrison Joseph Pitchon-Schroder <br> Nobuo Yamashita | Slovakia <br> England <br> Japan <br> USA <br> Japan | 15 | N/A | 15 | Free test submission and free society membership <br> until July $31,2024$. |
| $\mathbf{2}^{\text {nd }}$ Place | Hidden | Hidden | 14 | N/A | 14 | Free test submission until July 15, 2024. |
| $\mathbf{3}^{\text {rd }}$ Place | Motoki Semura <br> Guoxiong Li | Japan <br> China | 13 | N/A | 13 | 1/2-off test submission until June $30,2024$. |
| $4^{\text {th }}$ Place | Göran Åhlander | Sweden | 11 | N/A | 11 | Secret Prize: <br> given to all participants |

