## Box - Challenging Puzzle \#74



This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the $\mathrm{X}, \mathrm{Y}$, and Z directions.

## Rules:

1. "Words" may not start with a zero.
2. "Words" in the $X$ direction read from left to right.
3. "Words" in the $Y$ direction read from top to bottom.
4. "Words" in the $Z$ direction read from front to back.
5. There is one unique solution which satisfies all the clues given below.
6. Some "words" may not have clues. They will be determined by the "words" which intersect them.

If we take the box pictured above and divide it into individual X - Y layers, we will get these planes:


## X Direction

1 Y1 minus Z3
4 Seven times a prime number
7 Fifteen more than Y20
11 Rearranged digits of Z1
13 Consecutive digits unordered
18 Mean of Y2 and X7
19 Z15 minus Y18
20 Y 1 reversed
23 One thousand four hundred fourteen more than Y14
25 Twenty-six times a prime number
26 Z5 divided by Y18

## Y Direction

1 X20 reversed
2 One thousand nine hundred ninety-one 2 Half of X23, then subtract X25 less than X13
6 Six less than X4
10 X26 plus X19
14 Eighty-four times Z11
16 Nine hundred sixty-eight more than X23
18 X 1 reversed
20 Y2 minus X11
21 X18 divided by fifty-five
22 A prime number
24 Mean of Z15 and X11

## Z Direction

1 Z10 minus Y10
3 Nine times X26
5 Its digits total Z17
7 A prime number
8 Four times Z10
9 X18 divided by X26
10 Twice a prime number
11 Mean of Y18 and Z3
12 X 4 minus half of Z 11
15 Z 1 minus Y21
17 Mean of Z19 and X26
19 Z 15 reversed

## Solution:

| 1 | 6 |  | 9 | 8 | 6 | 7 | 9 | 5 | 1 | 1 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 6 | 1 |  |  | 7 |  | 1 | 8 | 1 | 3 | 4 |
| 5 | 8 | 5 | 2 | 6 | 2 | 7 | 0 | 3 | 4 | 0 | 6 |
|  | 8 | 5 | 1 | 1 | 0 |  | 2 | 7 |  | 1 | 1 |

