## Box - Intermediate Puzzle \#30



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 Eight hundred twenty-nine more than X26
5 Z13 divided by seventy-six
7 Z15 minus Y17
11 Y19 minus X5
13 Twice a prime number
15 Y9 minus Y12
17 Twice a prime number
20 Twice a prime number
21 Mean of Y10 and Y12
24 Six times a prime number
26 Three times a prime number

## Y Direction

1 Y10 minus Z3
2 Mean of Z13 and X7
3 Z14 divided by Z3
9 X21 plus half of Z15
10 Z15 plus X7
12 X21 minus Y19
15 A prime number
16 Half of X24, then subtract X17
17 Mean of X5 and Y3
19 Two-thirds of Y25
21 One hundred sixty
22 Y9 plus Y23
23 A prime number
25 Twice the result of Y10 minus Y1

## Z Direction

1 Y9 minus Y19
3 Three-fourths of Y19
4 Z6 minus X5
6 Six times a prime number
7 Y15 plus half of X20
8 Twice a square
12 Y23 plus X11
13 Fifty-two times a prime number
14 Three times Y16
15 Mean of X5 and Y9
18 A square
18 A square

## Solution:



