## Cube - Intermediate Puzzle \#15



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 cube pictured above and divide it into individual X - Y layers, we will get these planes:


## X Direction

1 Same as Y4
3 Y4 plus X1
5 Y9 minus Z2
8 Z7 plus Y8
11 Y9 reversed
12 Z 6 plus half of Y10
13 Consecutive digits in descending order

## Y Direction

2 Twice the result of Z1 plus Y13
4 Y9 divided by thirty-seven
8 One hundred sixty-nine less than Z2
9 Thirty-seven times X1
10 Twice a prime number
13 A prime number

## Z Direction

1 Rearranged digits of Y8
2 Sixty-nine more than Z6
3 Consecutive digits in ascending order
4 X11 plus Z11
5 A cube
6 Thirty-three times a prime number
7 Mean of X13 and X3
11 Consecutive digits in descending order

## Solution:

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

