## Cube - Intermediate Puzzle \#8



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

3 Eight times a prime number
6 Twenty-three times Z9
8 Mean of Y9 and Z4
11 Twice a prime number
12 Twice the result of Z5 minus Y2
13 Twice the result of Z 2 minus X 6
15 Twenty-two times a square

## Y Direction

1 Its digits total Z1
2 Z5 minus Z9
4 Mean of Z4 and X11
9 First two digits are the same as X13
10 Twice a square
14 Six times a prime number

## Z Direction

1 Y10 divided by six
2 Twice a prime number
4 X 15 divided by four
5 Same as Y14
6 X15 plus half of Y14
7 Mean of X15 and Z2
9 Y14 minus Y2

## Solution:

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

