## Cube - Intermediate Puzzle \#5



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 Half of Z6, then subtract Z3
5 Twice a prime number
7 Y8 reversed
9 Thirty-two times a prime number 10 Twice a prime number
13 Nine times a prime number
14 A square

## Y Direction

1 Half of X10, then subtract X13
2 Eight times a prime number
4 Y8 reversed
7 A prime number 8 X9 divided by Y7
10 Half of Y1
11 Twenty-seven times a prime number
12 Consecutive digits in descending order

## Z Direction

2 Six times a prime number
3 Thirteen times a prime number
4 Consecutive digits unordered
5 Mean of Z2 and Y2
6 Twice a prime number

## Solution:

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

