## Cube - Intermediate Puzzle \#35



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 Z5 plus Z4
$6 \mathrm{Z9}$ plus half of Y2
8 Consecutive digits in ascending order
10 Y13 divided by eight
11 Y12 minus X8
13 Eight times a prime number

## Y Direction

2 Mean of Y13 and X8
6 Five times a prime number
7 A prime number
11 Four times a prime number
12 Three times a square
13 Mean of Y2 and Y11

## Z Direction

1 Mean of Z2 and Y13
2 Fourteen times a prime number
4 A prime number
5 Three times a prime number
9 X3 divided by fourteen

## Solution:



