## Cube - Intermediate Puzzle \#7



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 X13 minus Y7
5 Twice Z9
7 X9 divided by six
9 Six times Y3
11 Mean of Z4 and X9
13 Mean of Z4 and Z3

Y Direction
2 Y10 plus Z3
3 Z1 divided by Z12
7 Z8 minus X11
8 Three times a prime number
10 Mean of X11 and Y2
13 Twice the result of X9 plus Z4

## Z Direction

1 Z12 times X7
3 Y10 minus X11
4 Y10 reversed
6 Consecutive digits in descending order
8 Twice the result of X7 plus X13
9 Half of Z4
12 Z 3 plus X13

## Solution:



