## Cube - Intermediate Puzzle \#19



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 Half of X10, then subtract Z2
5 X8 reversed
7 Z2 divided by fourteen
8 Twice a prime number
9 Six times a prime number
10 Four times a prime number

## Y Direction

1 A square
3 X8 minus X9
5 X10 minus Z6
8 Rearranged digits of Y5
9 Mean of Z6 and X7

## Z Direction

2 Z6 plus X8
3 Six times a square
4 Z 2 minus X 9
6 Z 4 minus Y 3
7 X9 minus Y1

## Solution:



