## Cube - Intermediate Puzzle \#24



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 Y8 plus X12
7 Thirty-nine times a square
10 Five times a prime number
12 A prime number
14 Mean of Y4 and Y2

## Y Direction

1 Three times a square
2 X7 divided by Y13
4 Z 4 minus half of Y11
6 X10 plus Y1
8 A prime number
10 Seven times Y13
11 Mean of Z3 and X7
13 Z 3 divided by forty-seven


## Z Direction

1 Twice a prime number
3 Forty-seven times Z9
4 Seven times a prime number
5 Half of Z3, then subtract Y8
9 X7 divided by Y2

## Solution:



