## Box - Intermediate Puzzle \#2



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 box pictured above and divide it into individual X - Y layers, we will get these planes:


## X Direction

1 Half of Y13
3 Rearranged digits of Y2
6 Z7 reversed
9 Z4 minus X1
10 Three times a square
11 Three times a prime number
12 X3 minus Z1
14 Twice the result of Z9 minus Z11
15 Mean of Z4 and Y13

## Y Direction

1 X12 plus Y4
2 Mean of X12 and X10
4 X6 reversed
8 Z6 plus half of X3
9 Z9 plus X11
10 A square
12 Five times a prime number
13 Three times X14

## Z Direction

1 Mean of X10 and X1
$2 \mathrm{Z1}$ divided by nine
3 Mean of Y2 and Z5
4 Z11 plus Z2
5 Consecutive digits in ascending order
6 Twice a prime number
7 Y1 minus X12
9 Ten times a prime number
11 Consecutive digits in descending order

## Solution:



