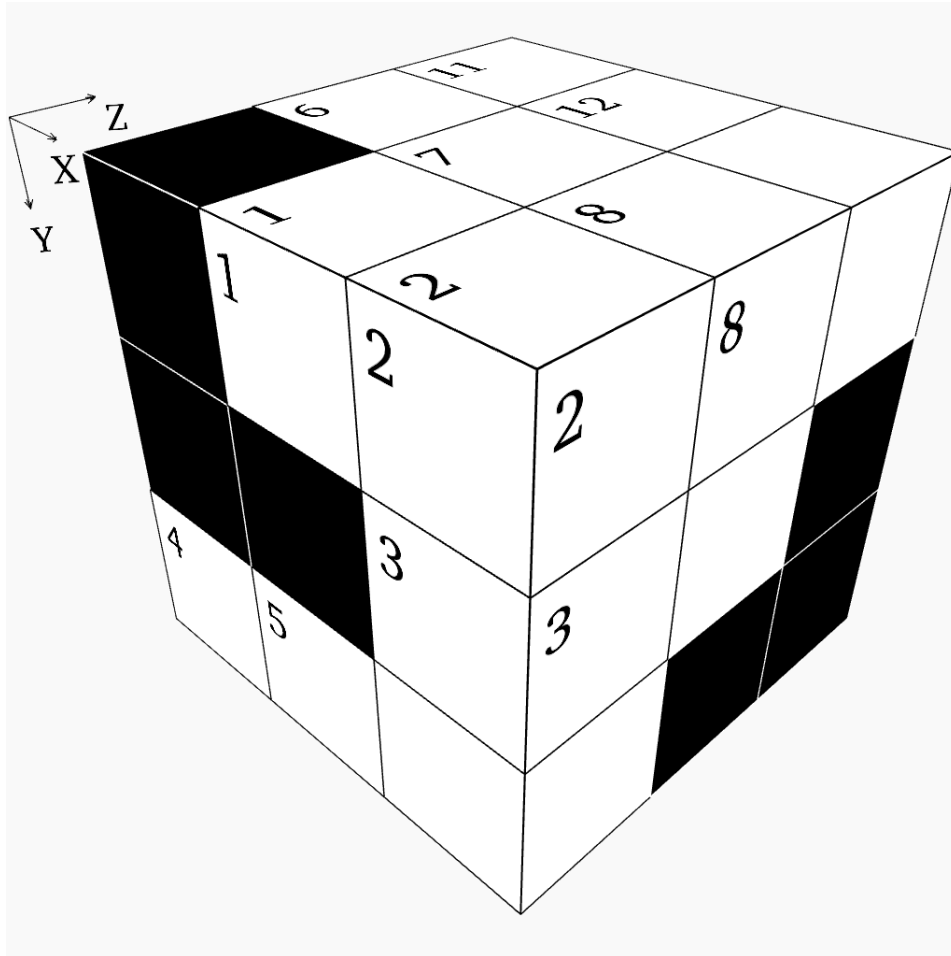# Cube - Challenging Puzzle #10

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 X,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:

	1	2		6	7	8		11	12	
■										
■	■	3		9	10			13		■
4	5			■		■		■		■

X Direction

1 Y7 minus Z6
4 Twice the result of X11 minus Z1
6 Thirteen times Y8
9 Z9 plus Y11
11 A prime number
13 Z9 reversed

Y Direction

2 Six times a square
6 A prime number
7 Z5 minus Z9
8 Mean of Z9 and Y6
11 Mean of Y12 and Z3
12 Four less than X9

Z Direction

1 Nine times a prime number
2 Z6 times Z10
3 Mean of Y11 and X13
5 Half of Y2, then subtract Y7
6 Y12 minus X13
9 X13 reversed
10 Y12 divided by ten

Solution:

	7	4	3	1	2	9	1	9
█	█	8	1	1	4	7	1	█
4	1	6	█	3	█	█	0	█