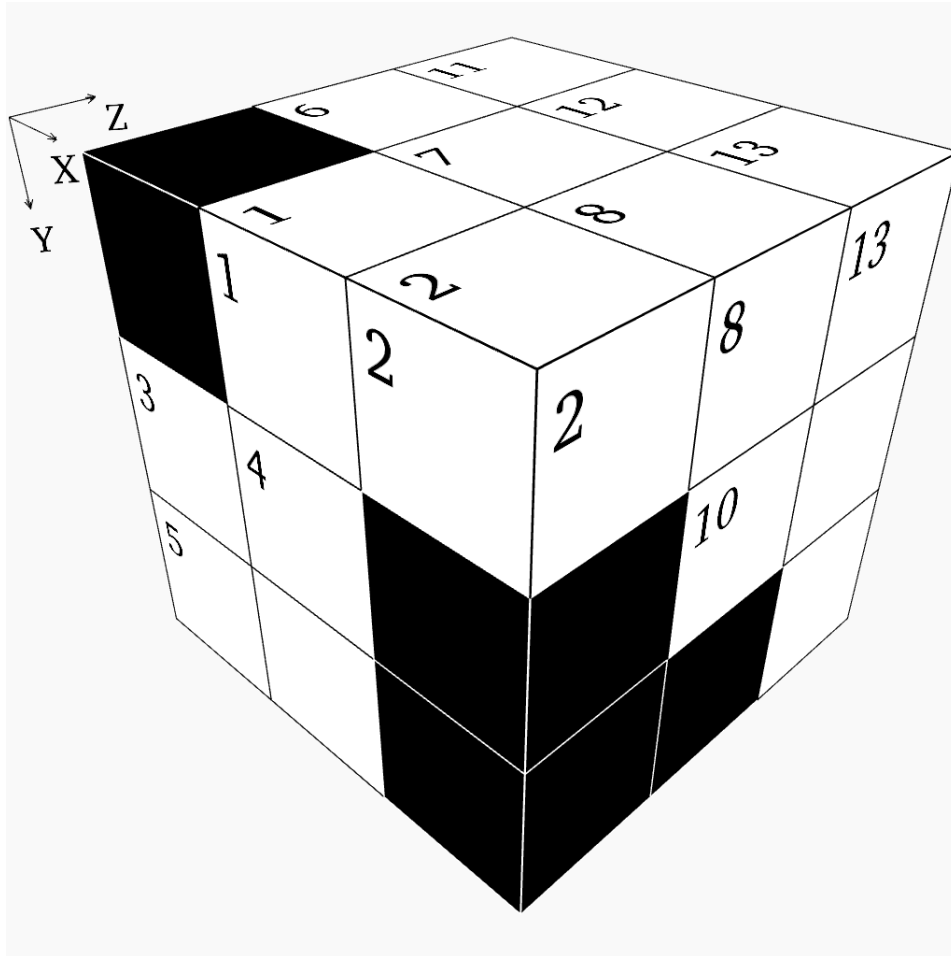# Cube - Intermediate Puzzle #34

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
3	4	■
5		■

6	7	8
■	9	10
	■	■

11	12	13
14		
■	15	

X Direction

1 Y11 plus Z6
3 Five times a prime number
5 Y3 reversed
6 Nine times Y7
9 X15 minus Z5
11 Y3 plus Z4
14 Nine times a prime number
15 Mean of X9 and X1

Y Direction

1 Last two digits are the same as last two digits of Y12
3 A square
7 A prime number
8 Z10 reversed
11 Mean of Z6 and X15
12 Its digits total X5
13 Twelve times Z10

Z Direction

1 Fifty-five times a prime number
2 Twice the result of X6 plus Y8
4 Y13 minus Y11
5 Z1 divided by X3
6 A square
10 X5 plus Y8

Solution:

	9	7	3	3	3	6	5	6
8	5	■	■	7	5	1	5	3
1	8	■	1	■	■	■	8	6