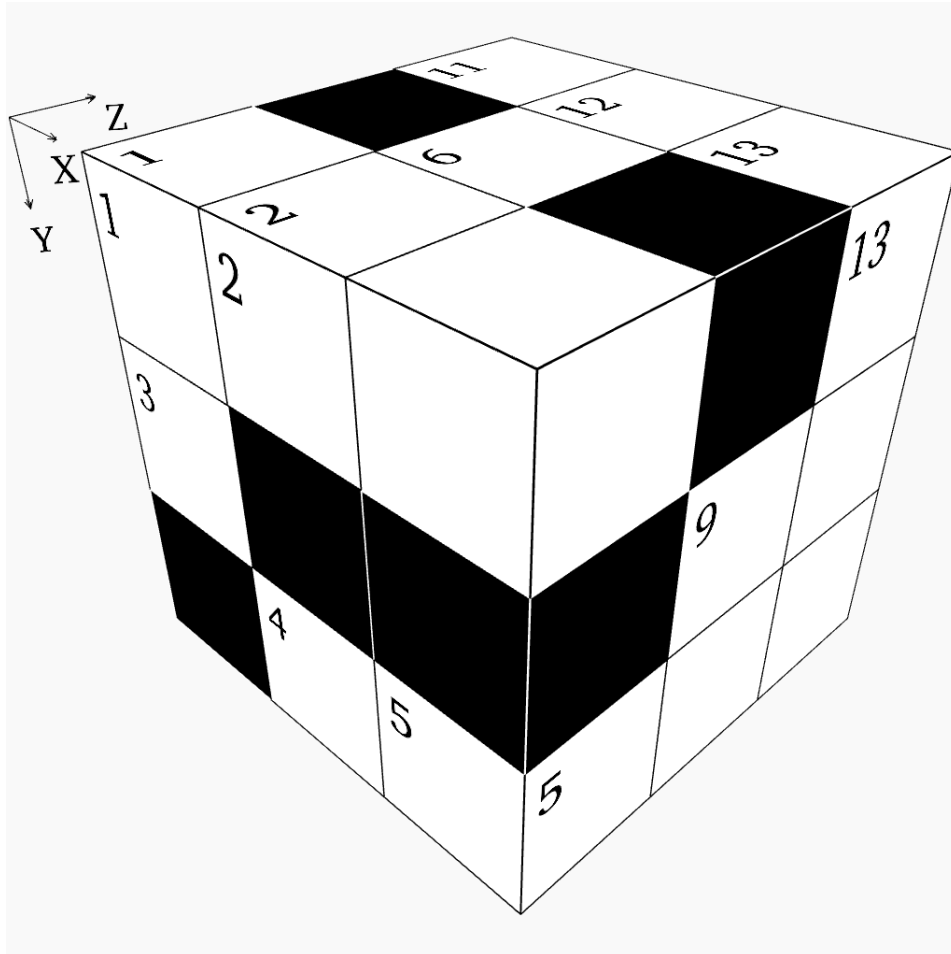# Cube - Intermediate Puzzle #25

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		
■	■	

X Direction

1 A cube
4 Z2 minus Z4
7 Twice a prime number
10 Twenty-two times a prime number
11 Four times Y7
14 Consecutive digits unordered

Y Direction

1 Y7 minus half of Z8
6 Mean of X4 and X14
7 Y9 reversed
9 Y7 reversed
11 Half of Y9
12 Twice a prime number
13 X1 minus Y1

Z Direction

2 Half of Z3, then subtract Y9
3 Three-fourths of X1
4 Mean of X4 and Z9
5 Mean of X11 and Y11
8 Mean of Y7 and Y12
9 Z5 minus Z2

Solution:

5	1	2	■	2	■	3	4	4
3	■	■	8	6	6	4	6	5
■	6	1	6	3	8	■	■	9