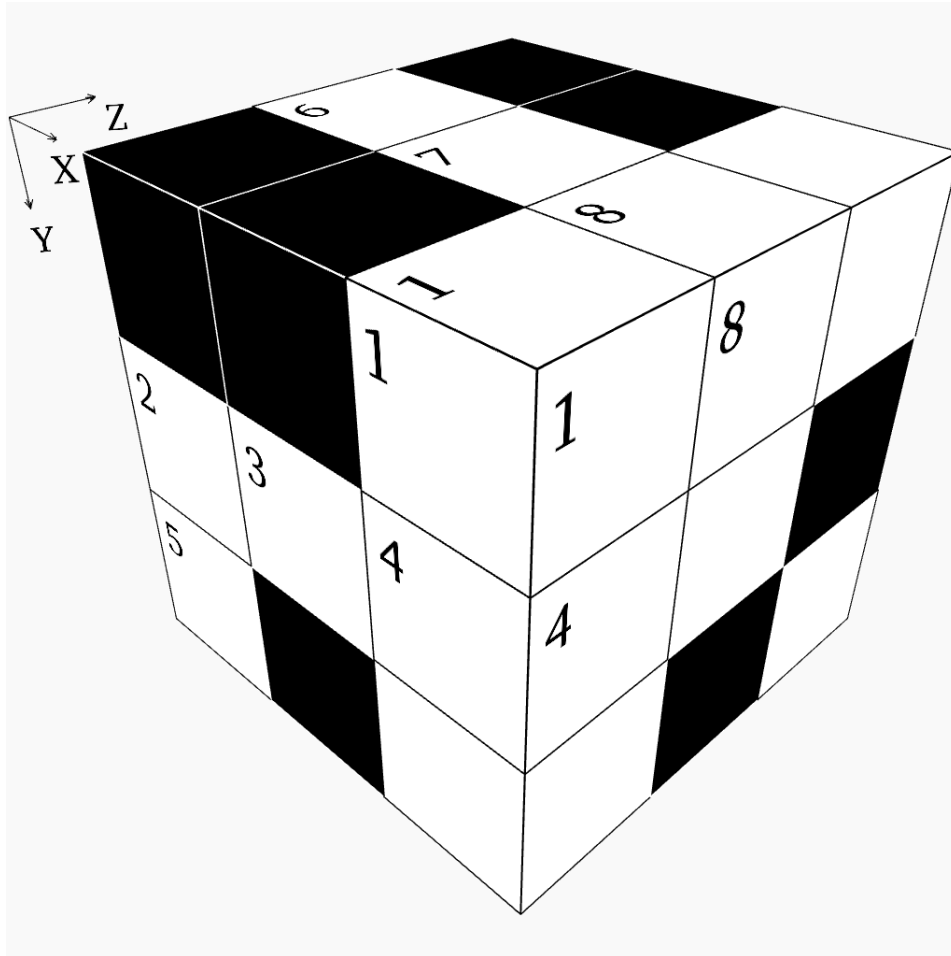# Cube - Intermediate Puzzle #52

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		6	7	8				
2	3	4		9				12	13	
5				10	11				14	

X Direction
2 Three times a prime number
6 Seven times a prime number
9 Twelve times a prime number
10 Twice a square
12 Z11 reversed
14 Twice the result of Y7 minus Z5

Y Direction
1 Twice the result of Z2 minus X6
2 Same as Z5
6 Seventeen times a prime number
7 Twice a prime number
8 X14 minus X10
13 Z3 divided by Y8

Z Direction
1 Mean of X2 and Y2
2 A square
3 Z11 times Y8
4 X9 divided by six
5 All digits are the same
11 X12 reversed

Solution:

		4	5	1	1			5
7	5	3	2	2	8	9	2	
7		6	7	2			9	0

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