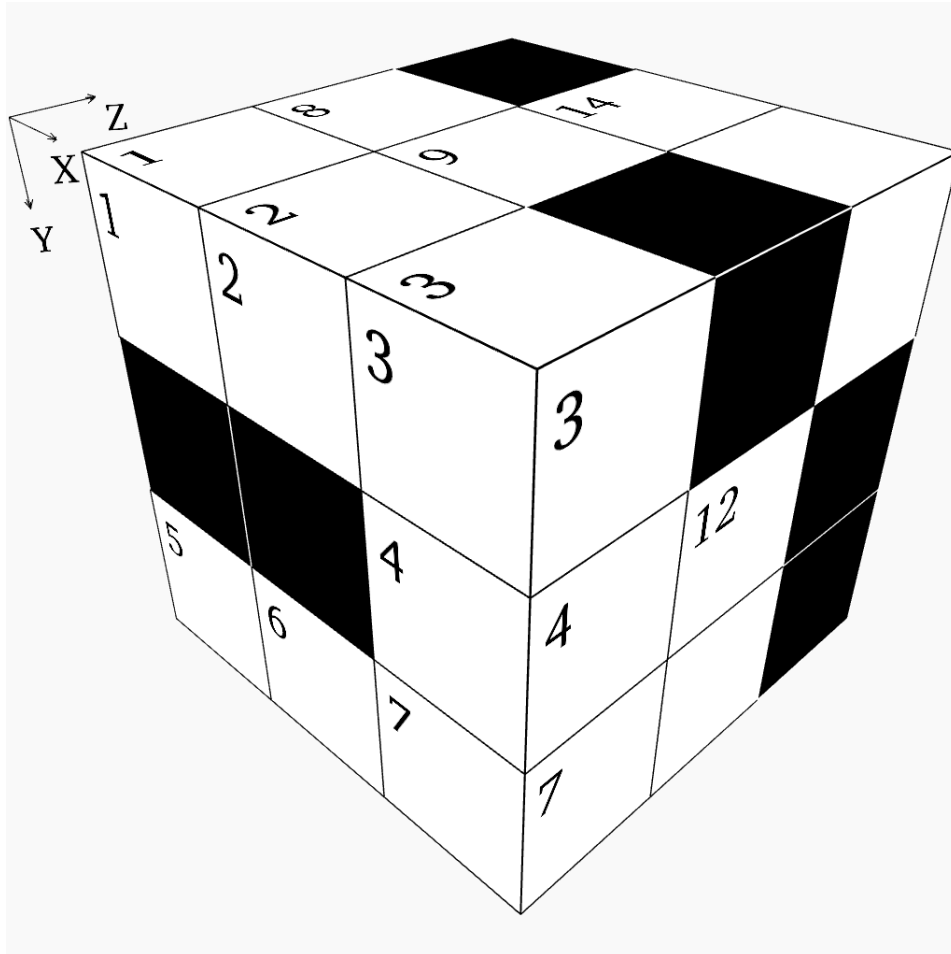# Cube - Intermediate Puzzle #44

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 Three times a prime number
5 Z1 times Z10
8 Seven times a square
10 Fifty-four times a prime number
13 Twelve times a prime number
14 A prime number
15 X5 divided by Y14

Y Direction
3 Twelve times a prime number
8 A prime number
9 Mean of Y8 and X1
12 Y3 minus X13
14 Twice a prime number
15 Mean of X15 and Z10

Z Direction
1 A square
2 Mean of Y9 and Z7
4 Same as Z11
5 Z2 plus Y8
6 Twice the result of Y15 minus X14
7 Four times a prime number
10 Four times Y14
11 Mean of Z4 and Z6

Solution:

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