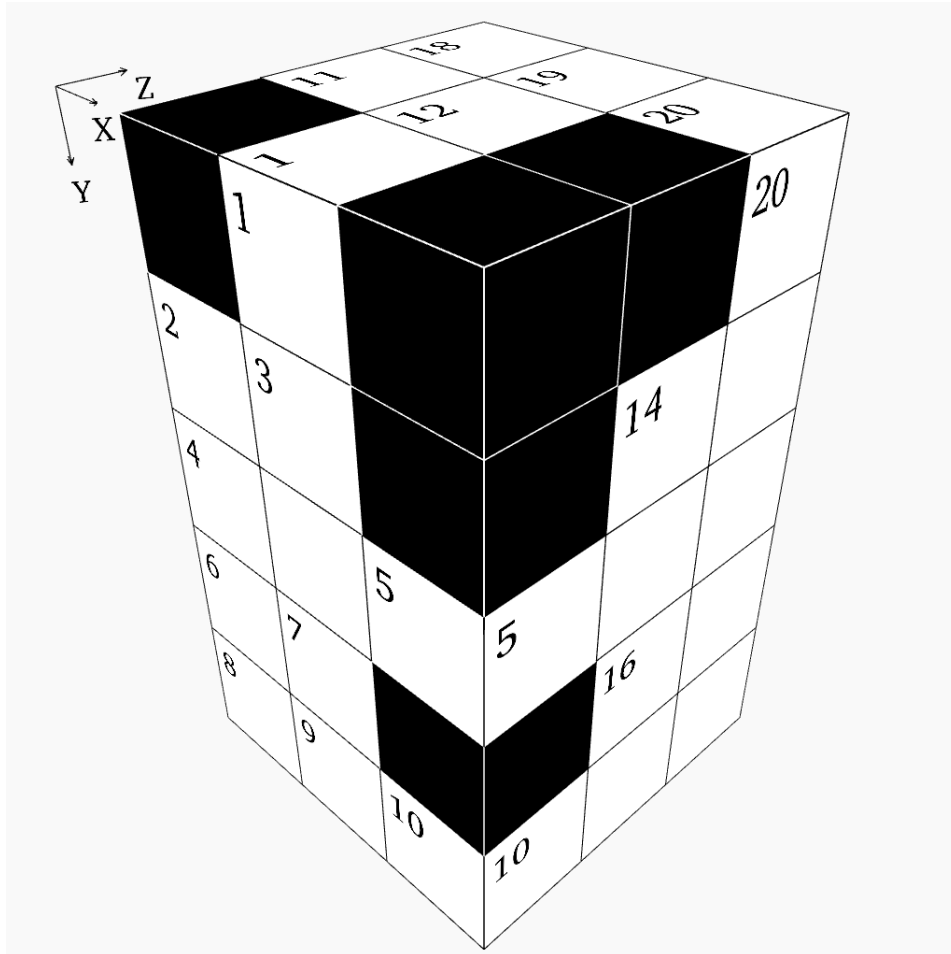


Difficulty: ★★☆☆☆

Box - Challenging Puzzle #49



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 box pictured above and divide it into individual X-Y layers, we will get these planes:

	1		11	12		18	19	20
2	3		13		14	21		
4		5						
6	7			15	16		22	
8	9	10	17			23		

X Direction

- 2 Mean of X15 and X6
- 4 Three times a prime number
- 6 X11 plus Y12
- 8 X21 minus Z4
- 11 X8 minus half of Z8
- 13 Twice a prime number
- 15 X8 minus X11
- 17 A prime number
- 18 X4 minus half of Z7
- 21 A square
- 22 Z8 divided by six
- 23 A square

Y Direction

- 1 Twelve times a prime number
- 2 Seven times a prime number
- 11 X23 minus Y12
- 12 A square
- 14 Nine times a prime number
- 15 Five times Y12
- 18 Twice the result of Z1 plus Z14
- 19 X2 minus Z14
- 20 Nineteen times a prime number
- 22 Z11 reversed

Z Direction

- 1 X18 minus X8
- 2 X21 minus X6
- 3 X17 minus X23
- 4 X11 times Y12
- 5 Z4 minus X13
- 7 Thirty-four times a prime number
- 8 Twice X15
- 9 Y18 minus X2
- 10 Eleven times a square
- 11 Z1 minus X2
- 14 Same as Y22
- 16 A prime number

Solution:

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