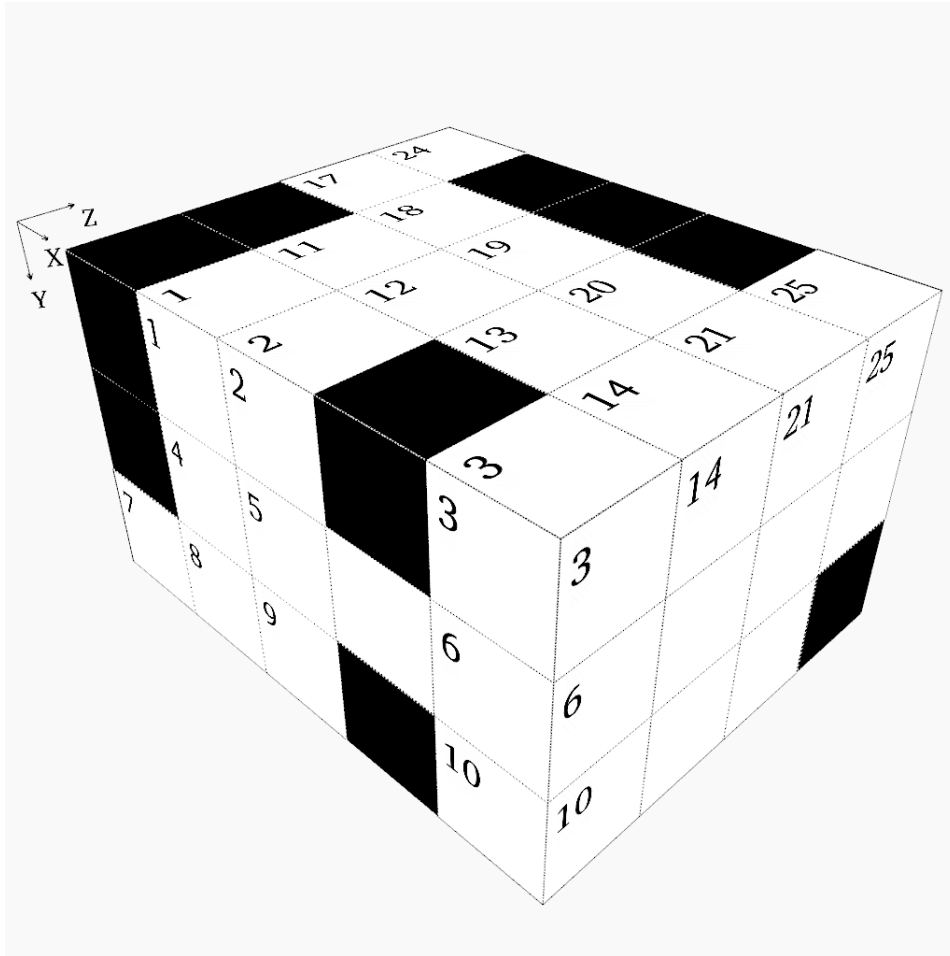


Difficulty: ★★☆☆☆

Box - Challenging Puzzle #12



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	2		3		11	12	13	14	17	18	19	20	21
	4	5		6	15					22			23	
7	8	9		10	16									
					24				25					
					26	27		28						
					29									

X Direction

- 1 Mean of Y25 and Y17
- 4 Z4 plus X26
- 7 Y19 plus Z1
- 11 Z9 times Y20
- 15 Twenty-eight times a prime number
- 16 Four times a prime number
- 17 Twice a prime number
- 22 Ninety times a prime number
- 26 Y15 minus Y17
- 28 Z23 reversed
- 29 Seventy-one times a prime number

Y Direction

- 1 Twice the result of Z5 plus Z23
- 2 A prime number
- 3 Mean of Y19 and X7
- 11 X7 minus X26
- 12 X15 plus Z17
- 14 Six times a prime number
- 15 A square
- 17 Y28 divided by three
- 18 A square
- 19 Y1 minus Z10
- 20 Mean of Y27 and Y28
- 21 Half of Y14, then subtract Y3
- 24 Twice a prime number
- 25 Z17 reversed
- 27 Y19 plus X1
- 28 Three times Z23

Z Direction

- 1 Y12 minus half of Y24
- 2 Mean of X7 and Y15
- 3 A prime number
- 4 One hundred seventy-one less than X29
- 5 Y17 times Z17
- 6 Thirty-seven times a prime number
- 7 Y27 minus X1
- 8 X29 divided by Y25
- 9 A prime number
- 10 Mean of X15 and X1
- 13 A square
- 15 Its digits total Z17
- 17 Z5 divided by Z23
- 23 Y15 minus X26

Solution:

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