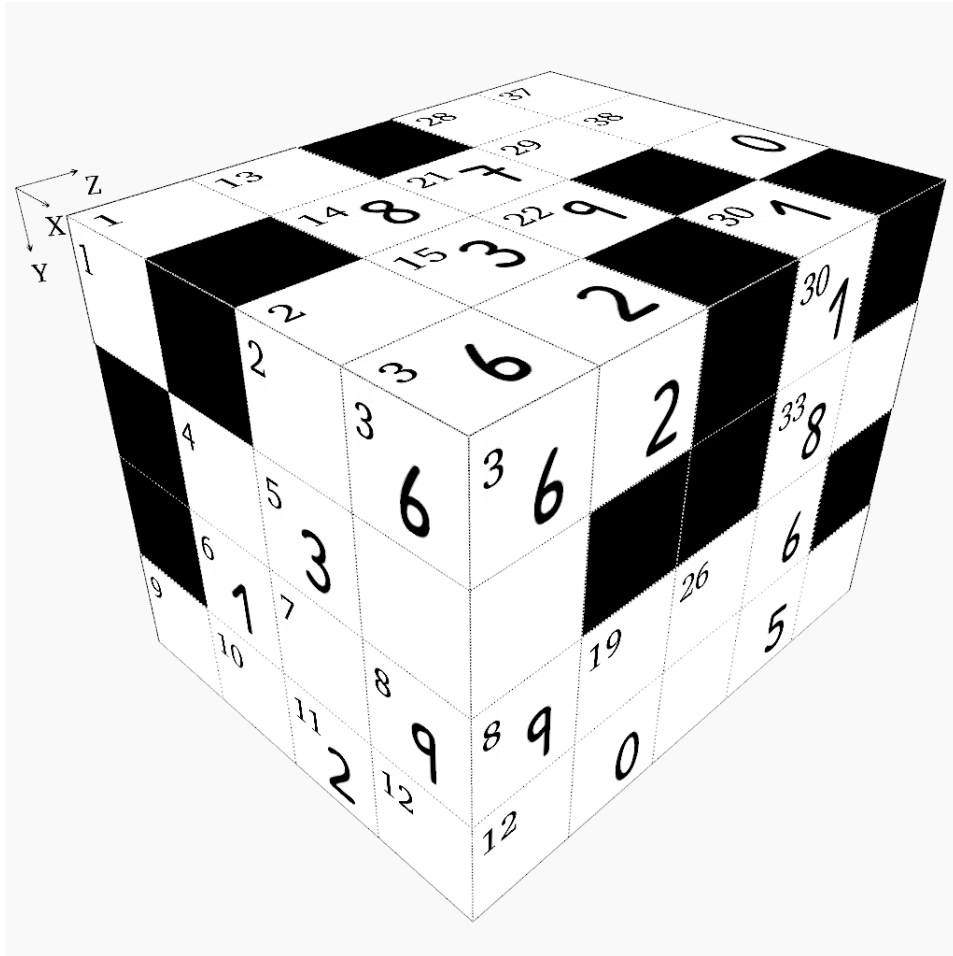


Difficulty: ★★★★★

Box - Beginner Puzzle #47



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	6	13	14	8	15	3	2		21	7	9	
	4	5	3		16							23	1	7	
	6	1	7	9	17	9		18		19		24		25	26
9	10	2	12		20	4	0	0				27	9	5	

28	29		30	1	37	38	0	
	31	32	33	8	39			
34	8	35	6		40	7	41	7
		36	9	5	42	7	0	

X Direction

- 2 Z12 minus Y37
- 4 Z3 plus Z7
- 6 A square
- 9 A prime number
- 13 Six hundred ninety-five less than Z17
- 16 Z10 plus Y23
- 18 Y19 plus Z3
- 20 X27 minus X4
- 21 X31 minus Z2
- 24 Y34 plus Y25
- 27 Ten times a prime number
- 28 X21 plus Y19
- 31 Twice a prime number
- 34 Four times a prime number
- 36 X37 divided by Z4
- 37 Thirty-eight times Y25
- 39 Y41 plus Y34
- 40 Seventy-one less than X31
- 42 Forty-seven times a prime number

Y Direction

- 2 Nine times X31
- 3 A prime number
- 4 Mean of Y32 and Z31
- 13 A prime number
- 14 Y26 plus Z4
- 15 Forty times Z31
- 19 Y23 minus Y32
- 22 Mean of X36 and Z28
- 23 Y22 plus Z3
- 25 A square
- 26 Y38 divided by X18
- 29 Nineteen times X24
- 30 Five times a prime number
- 32 Z31 plus X24
- 34 X6 minus half of Z25
- 37 Eleven times a prime number
- 38 Y41 times X18
- 41 Z1 plus X24

Z Direction

- 1 X28 minus Z33
- 2 A prime number
- 3 X24 plus Z4
- 4 Two-fifths of Y25
- 5 Thirty-nine times a prime number
- 7 Mean of Z28 and Z35
- 8 Twelve times a prime number
- 9 Three times a prime number
- 10 Consecutive digits in ascending order
- 11 Ten times a prime number
- 12 Nine times a prime number
- 14 X13 minus Z35
- 16 Mean of Y19 and X18
- 17 Seven times a prime number
- 25 Four times a prime number
- 28 Z33 plus Z1
- 31 X39 minus Z4
- 33 A square
- 35 Z3 minus Y25

Solution:

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

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