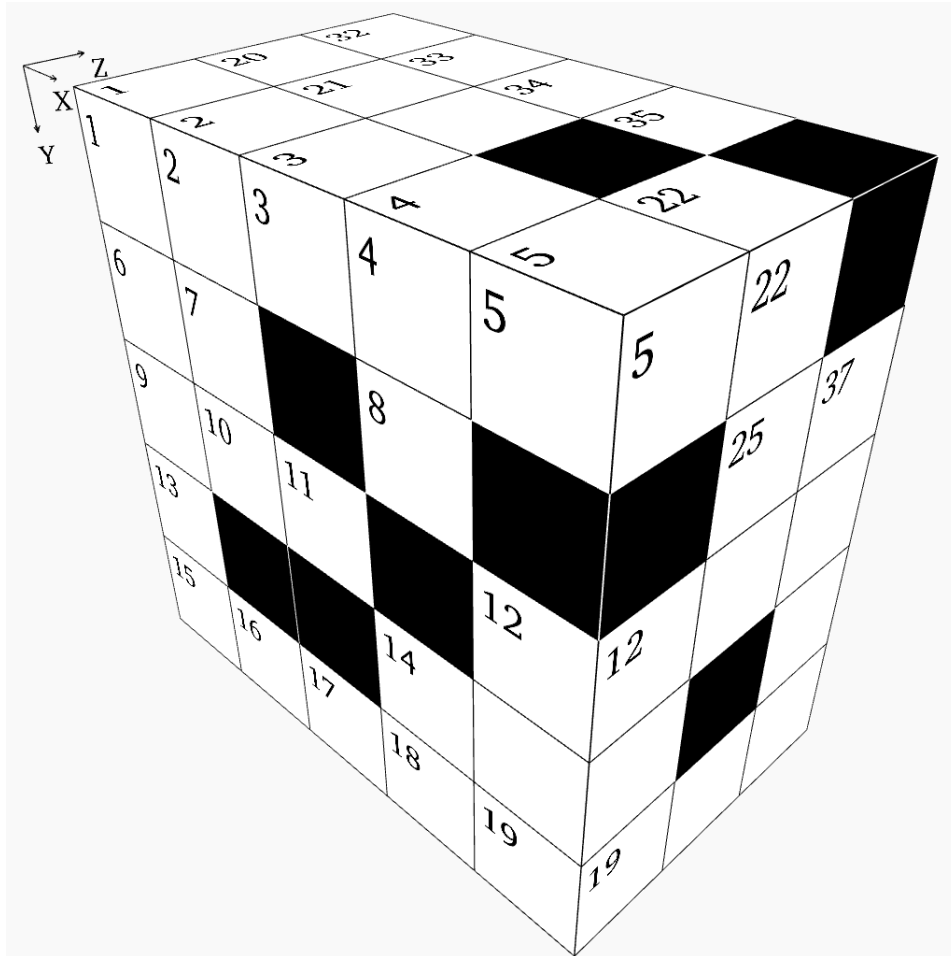


Difficulty: ★★☆☆☆

Box - Challenging Puzzle #42



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	4	5	20	21			22	32	33	34	35	
6	7		8		23			24	25	36				37
9	10	11		12	26		27	28				38		
13			14		29	30				39	40		41	
15	16	17	18	19		31					42			

X Direction

- 1 X15 plus Y12
- 6 Mean of X41 and Z28
- 9 Twice the result of Z19 plus Z30
- 14 Y34 divided by Y4
- 15 Nine times a prime number
- 20 Z12 plus X9
- 23 Mean of Y14 and Z28
- 24 Three times Z25
- 26 X36 minus Y27
- 29 Three times a prime number
- 31 Twelve times a prime number
- 32 Five hundred eighty-eight less than Y37
- 36 Fourteen thousand seven hundred thirteen more than X15
- 38 Twice a prime number
- 39 Mean of X23 and X41
- 41 Mean of Z30 and Z28
- 42 Y35 divided by Z25

Y Direction

- 1 Twice a prime number
- 2 Z8 minus half of X6
- 4 Y2 minus Z16
- 12 Mean of Z1 and Y4
- 14 X6 reversed
- 20 All digits are the same
- 21 X20 times Y14
- 22 Z1 minus half of Y33
- 24 Twice a prime number
- 27 X38 minus Y22
- 32 A square
- 33 Six times Z10
- 34 Forty-four times a prime number
- 35 Z5 times X42
- 37 Mean of Y24 and Z3
- 40 Z9 minus Z10

Z Direction

- 1 Rearranged digits of Z17
- 2 Twenty-nine times Y40
- 3 Z9 plus Z16
- 5 Same as Z25
- 6 Twice a prime number
- 7 Z14 plus Y4
- 8 Consecutive digits unordered
- 9 X23 minus Z30
- 10 Z13 divided by X23
- 11 A cube
- 12 Rearranged digits of Y12
- 13 Twenty-one times Z9
- 14 X9 plus X39
- 16 Z13 minus X14
- 17 Twice a prime number
- 18 Thirty-four times Z30
- 19 Three times a prime number
- 25 Y14 minus Z30
- 28 Y14 plus X14
- 30 Y14 minus Z5

Solution:

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