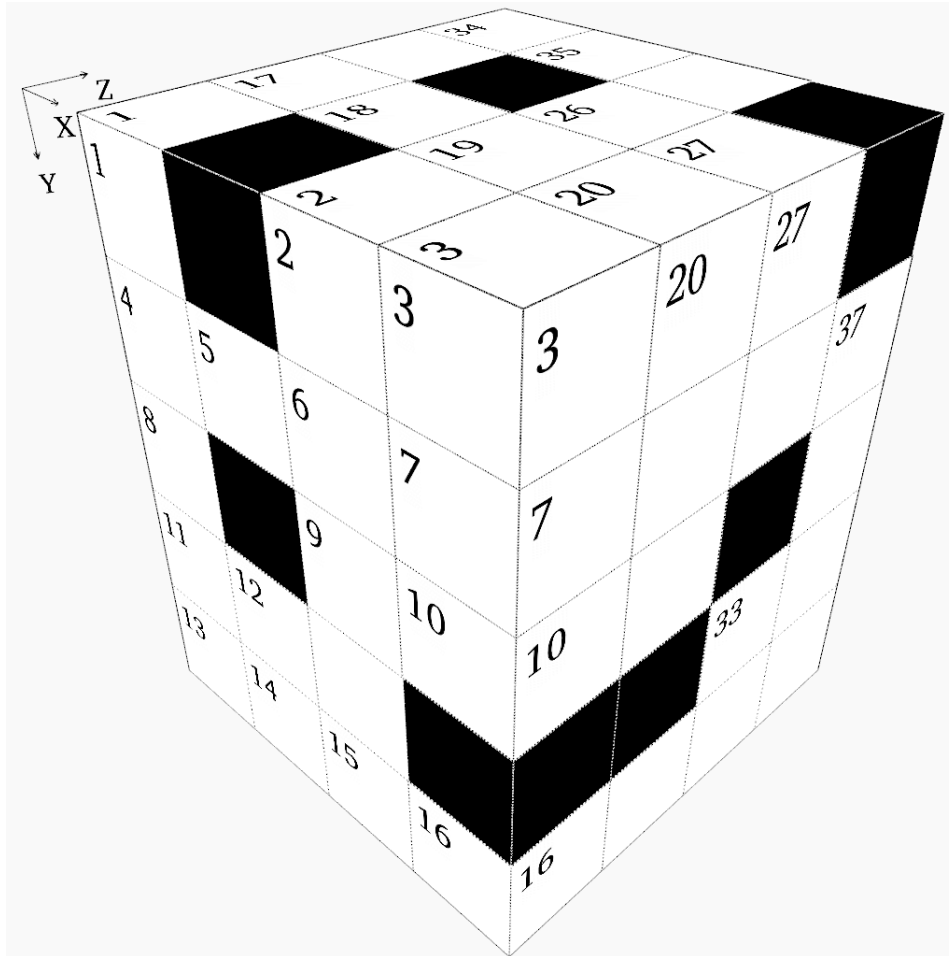


Difficulty: ★★☆☆☆

Box - Challenging Puzzle #39



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

X Direction

- 2 X34 divided by eighteen
- 4 Thirty-five times a prime number
- 9 Z4 plus Z33
- 11 Five times X23
- 13 Thirty-nine times a prime number
- 17 X4 plus Y29
- 21 Seven hundred seventy less than Z12
- 22 Z15 plus X26
- 23 X29 minus Z30
- 25 Fifty-four times Y18
- 26 X25 divided by Y27
- 28 Ten times a prime number
- 29 Y29 minus Z4
- 31 Rearranged digits of X40
- 34 Sixty-six times Z10
- 36 Z3 divided by sixteen
- 38 Twice a prime number
- 40 Twice the result of Z12 minus Z2
- 41 Y24 times Z4

Y Direction

- 1 Five thousand six hundred forty-one less than Y35
- 2 First two digits are the same as first two digits of Z9
- 3 Eleven times X9
- 12 Z15 plus X26
- 17 Its digits total X36
- 18 Mean of X2 and X26
- 19 Z16 minus half of Y18
- 20 Seven times X36
- 24 A square
- 26 Y37 minus X13
- 27 Y24 minus Z14
- 28 Z33 plus Y39
- 29 A square
- 33 Z15 minus X26
- 34 Forty-seven times a prime number
- 35 Twenty-three thousand nine hundred ninety-four more than Y34
- 37 One thousand seven hundred thirty-eight less than Z1
- 39 Three times a prime number

Z Direction

- 1 X21 plus Z30
- 2 Mean of Z10 and X40
- 3 Mean of Z30 and Y39
- 4 Y27 minus X9
- 5 Y1 divided by X2
- 6 Nine times a prime number
- 7 A prime number
- 8 Rearranged digits of X41
- 9 Z11 minus Z33
- 10 Z11 minus half of X38
- 11 Mean of Z3 and X31
- 12 First two digits are the same as X23
- 13 A prime number
- 14 X9 minus Y33
- 15 X2 plus Z10
- 16 Y33 plus Y19
- 30 X23 minus Z4
- 32 X29 minus X22
- 33 Sum of digits in Y2

Solution:

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