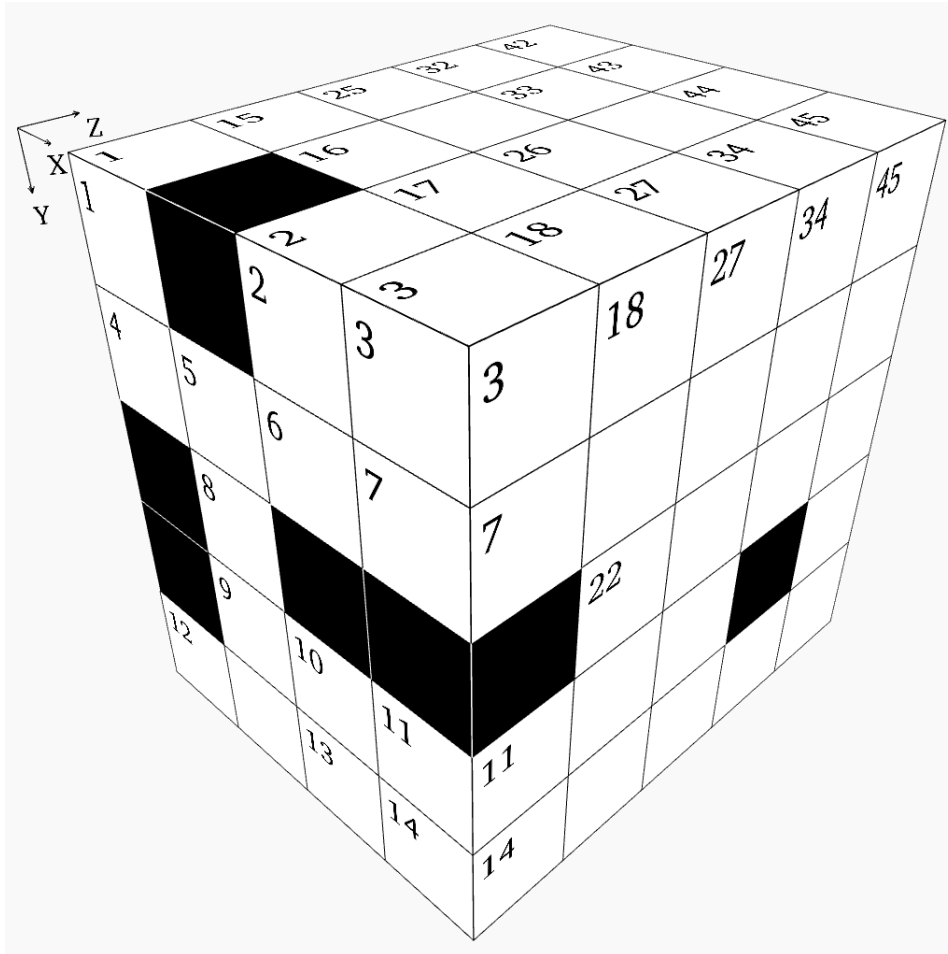


Difficulty: ★★★★★

Box - Hard Puzzle #50



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	15	16	17	18	25		26	27
4	5	6	7	19						28	
	8			20		21	22	29	30		
	9	10	11	23							
12		13	14			24			31		

32	33		34	42	43	44	45
35	36			46			
		37				47	
38	39	40		48	49		
41				50			

X Direction

- 2 Mean of Y2 and X28
- 4 Y37 times Z38
- 9 Four times a prime number
- 12 Three times X23
- 15 Y17 minus X20
- 19 Thirteen times a prime number
- 20 Rearranged digits of X23
- 23 Z41 plus Z21
- 24 Y16 minus half of X12
- 25 X41 minus Z36
- 28 Mean of Z35 and X24
- 29 Eleven times a prime number
- 31 Three times a prime number
- 32 Twenty-five times a prime number
- 35 X19 divided by Y34
- 37 Z10 plus Y10
- 38 Mean of Y39 and Z31
- 41 X25 plus Y43
- 42 Three times a square
- 46 X12 minus Y11
- 47 Y30 minus Z10
- 48 Ten times a prime number
- 50 Ten times a prime number

Y Direction

- 1 Y30 minus Z41
- 2 X37 minus Z40
- 3 Mean of Y39 and Y10
- 5 Rearranged digits of X25
- 10 Mean of Z38 and X24
- 11 Mean of Y1 and Y39
- 15 A prime number
- 16 Mean of Y3 and X12
- 17 X50 plus X12
- 18 Eighty-six times a prime number
- 26 X38 minus Y43
- 27 A prime number
- 30 Z41 plus Z40
- 32 Thirty-one times a prime number
- 33 Y49 minus Z38
- 34 A prime number
- 37 X4 divided by X2
- 39 Five times X35
- 42 Fifteen times a prime number
- 43 Z11 divided by X35
- 44 Y45 minus half of Z35
- 45 Three times a square
- 49 A prime number

Z Direction

- 1 Y5 plus half of Z2
- 2 Eight times a prime number
- 3 Mean of Y15 and Z12
- 4 X2 plus Y33
- 5 Y1 plus Y33
- 6 Twice a prime number
- 7 Fifty times a prime number
- 8 X38 plus X28
- 9 Ninety-one times a prime number
- 10 X4 divided by Y37
- 11 Mean of Z6 and Y11
- 12 Z35 plus Y39
- 13 Twenty-nine times a prime number
- 14 Mean of Z7 and Z22
- 16 X48 minus X31
- 20 Mean of X41 and Y39
- 21 A prime number
- 22 Forty-six times Z41
- 31 X4 minus X25
- 35 Y39 minus X37
- 36 X38 minus Y26
- 38 X37 minus Y10
- 40 Z5 minus Y33
- 41 X24 plus Y33

Solution:

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

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