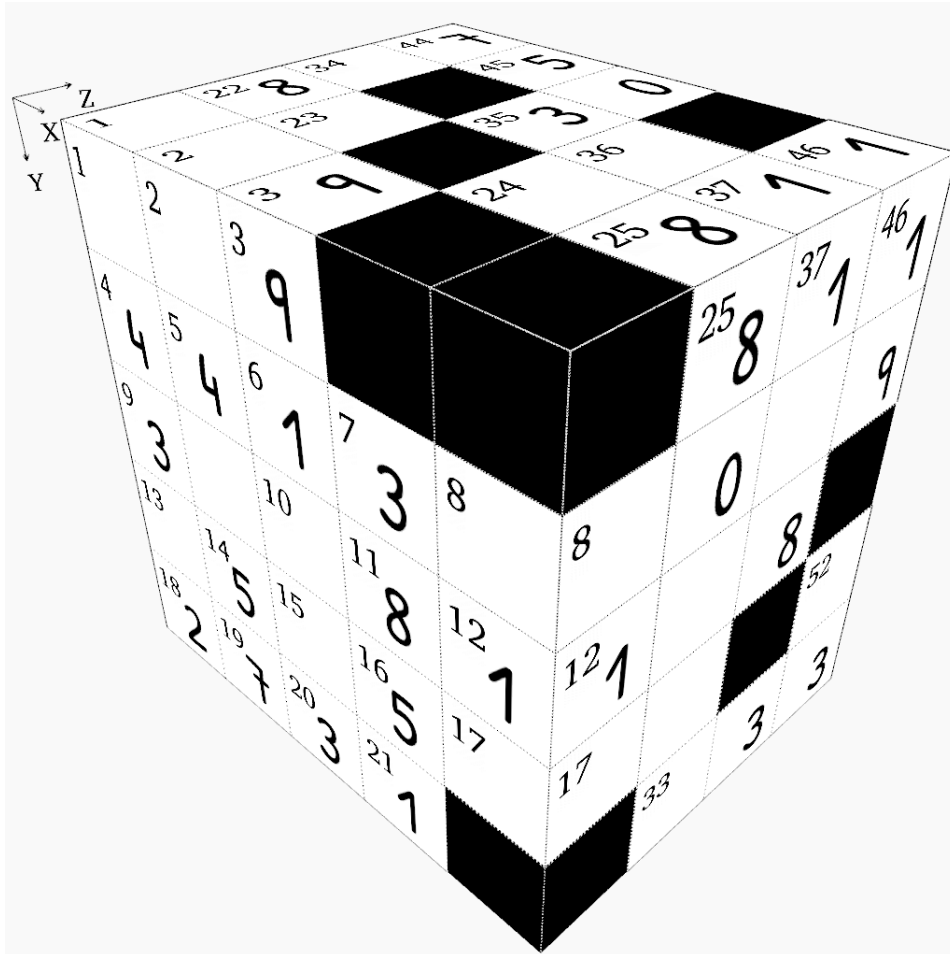


Difficulty: ☆☆☆☆☆

Box - Beginner Puzzle #13



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	9		22	23		24	25	34		35	36	37
					8				8			3		1
4	4	5	1	3		26	27		0	38	39	2		
9	3		10	8	1	28		29	4	40	41	9		8
13		5	15	5		30	31			42	7		2	
18	2	7	20	3	1	32		8		33	43			3
						44	45	5	0		46			1
						47				48	1	9		
						49	8				5			
						50			51	9	0			
									53	3				3

X Direction

- 1 Y46 times X47
- 4 Three thousand seven hundred thirty-three more than Y24
- 9 Twenty-nine times a prime number
- 13 One thousand two hundred eighty-six more than Y44
- 18 A prime number
- 22 Z12 minus Z35
- 24 Y52 plus Z17
- 26 Ninety-one times a square
- 29 A square
- 30 Fifteen times a prime number
- 32 Last two digits are the same as last two digits of Z19
- 35 Rearranged digits of Y37
- 38 Seventeen thousand six hundred fifty more than X13
- 40 Mean of Y35 and X53
- 42 Mean of Z15 and Z17
- 43 A prime number
- 44 Thirty-seven more than Y8
- 47 Z16 minus X48
- 48 Z38 minus Y31
- 49 X24 reversed
- 50 Twelve thousand seven hundred twenty-five more than Y34
- 53 X29 minus X24

Y Direction

- 1 Five thousand one hundred ninety-six more than Y34
- 2 X32 minus X22
- 3 One thousand four hundred ninety less than X38
- 7 A prime number
- 8 Y27 minus Z19
- 23 Z13 divided by X49
- 24 Mean of Y25 and X43
- 25 Eighteen thousand two hundred fifty-four more than X50
- 27 Twice a square
- 28 Thirty-two times Z21
- 31 Mean of Z12 and Z35
- 34 Mean of Y3 and Z8
- 35 Seventy-seven times a prime number
- 36 Z16 plus X44
- 37 X22 plus Z16
- 39 Fifteen times a prime number
- 44 A prime number
- 45 Fifty-three times a prime number
- 46 Z38 minus Y31
- 48 Three times a prime number
- 51 Y46 plus Y31
- 52 X13 divided by Z14

Z Direction

- 1 Three times a prime number
- 2 X32 minus Y2
- 5 One thousand eighty-eight more than Z20
- 6 Z2 plus Z35
- 7 A prime number
- 8 A prime number
- 9 Mean of Y7 and Y39
- 10 Mean of X43 and Z17
- 11 Five times a square
- 12 Y39 minus Z18
- 13 Eighty-four times a prime number
- 14 One thousand two hundred fifty-eight less than Z8
- 15 Eleven times a prime number
- 16 Y46 plus X47
- 17 Z24 minus Y52
- 18 Y39 minus Z6
- 19 Five times a prime number
- 20 A prime number
- 21 Z2 minus Y31
- 24 Y28 minus half of Y36
- 25 Mean of Z15 and Z38
- 33 Forty-one times Y52
- 35 X44 divided by twenty-five
- 38 Three times X47
- 41 Mean of Y37 and Z16

Solution:

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