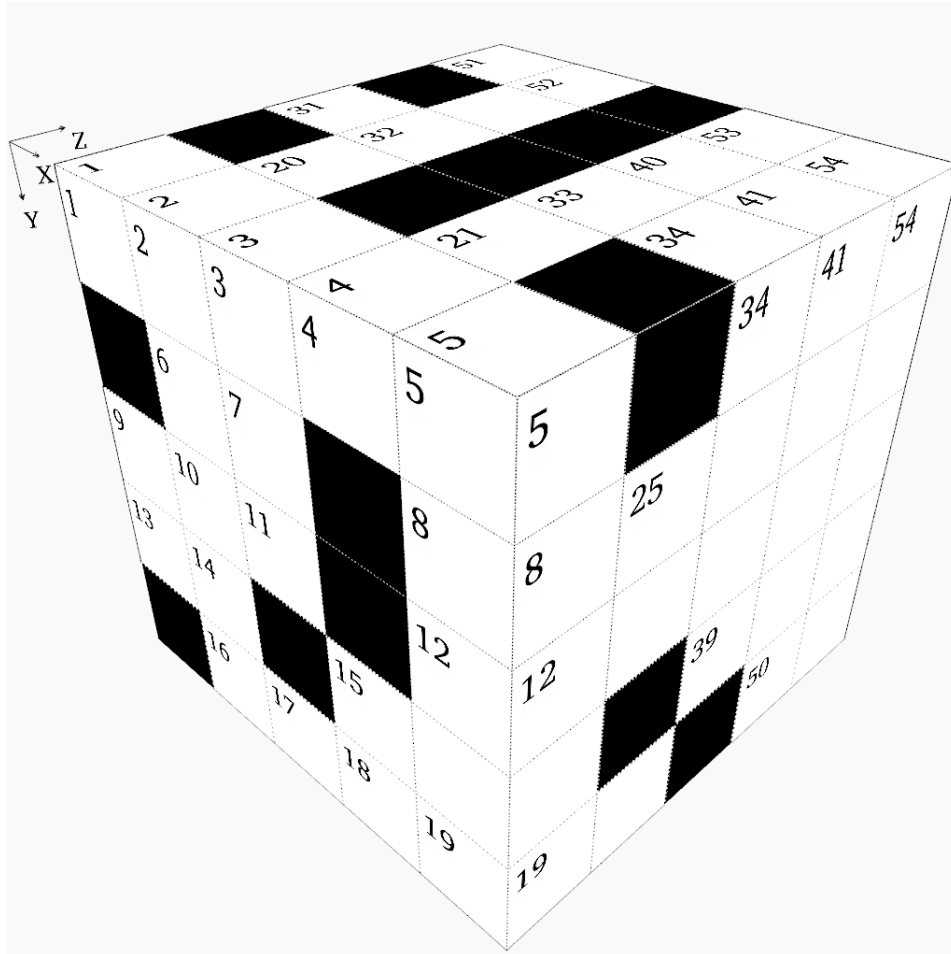


Difficulty: ★★★★★

Cube - Hard 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 cube pictured above and divide it into individual X-Y layers, we will get these planes:

1	2	3	4	5		20		21		31	32		33	34
	6	7		8	22		23	24	25	35		36		
9	10	11		12	26			27		37				
13	14		15		28		29			38				39
	16	17	18	19	30									

			40	41	51	52		53	54
		42			55		56		
43	44		45		57				
	46				58			59	
47	48		49	50	60				

X Direction

- 1 Seven times a prime number
- 6 Mean of Y25 and Z50
- 9 A prime number
- 13 Z15 minus X47
- 15 Half of X22, then subtract Y20
- 16 A prime number
- 22 Twenty-four times a prime number
- 26 A prime number
- 28 Twenty-one times a prime number
- 30 Sixty-four times a prime number
- 31 X46 plus Z22
- 33 Sum of digits in X60
- 35 Rearranged digits of Z10
- 37 Four times a prime number
- 38 Three times a prime number
- 40 Mean of Z13 and Y56
- 42 Eighty-six times X59
- 43 Y44 minus Z19
- 45 Z16 plus X59
- 46 Z22 minus X59
- 47 Z48 reversed
- 49 X51 minus Z15
- 51 Twice the result of X59 plus Z50
- 53 X15 plus X6
- 55 Seven thousand three hundred twenty-four less than Y5
- 57 Ten times a prime number
- 58 X15 minus Z50
- 59 Z17 minus X58
- 60 Nineteen times a prime number

Y Direction

- 2 Thirty-eight times a prime number
- 3 Mean of X51 and X42
- 5 Three times a prime number
- 9 Z11 minus Y15
- 15 X45 minus X58
- 20 Two hundred fifty-two more than X30
- 21 Six times a prime number
- 22 A prime number
- 23 First two digits are the same as X45
- 25 A cube
- 31 Half of Z12, then subtract X31
- 32 Z9 divided by X46
- 33 A prime number
- 34 Sixty-three times a prime number
- 36 Z39 minus Z16
- 40 Z30 minus X53
- 41 Seventeen times a prime number
- 44 X51 plus Z22
- 51 Z8 plus Y23
- 52 Nine times a prime number
- 53 Fourteen thousand seven hundred fifty-seven less than Y5
- 54 Fifty-one times a prime number
- 56 X45 minus X6

Z Direction

- 2 Eight times a prime number
- 4 Its digits total Z17
- 6 Z7 divided by X40
- 7 Eight thousand two hundred less than Y41
- 8 Fifteen times a prime number
- 9 Thirty-six times a prime number
- 10 X55 plus half of Z24
- 11 Z15 plus Z16
- 12 Four thousand four hundred seventeen more than Y52
- 13 Seven times X43
- 14 Z13 times Y33
- 15 X43 plus X6
- 16 Five times X46
- 17 Mean of Y56 and X43
- 18 Y40 plus half of X57
- 19 Y9 plus Z50
- 22 X1 minus Z2
- 24 Z27 minus Z30
- 27 Seven times a prime number
- 29 Mean of Y36 and X40
- 30 Z39 plus half of X53
- 34 Twice a prime number
- 39 Mean of Z30 and Y40
- 48 Z7 divided by Z6
- 50 Z48 minus X15

Solution:

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

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