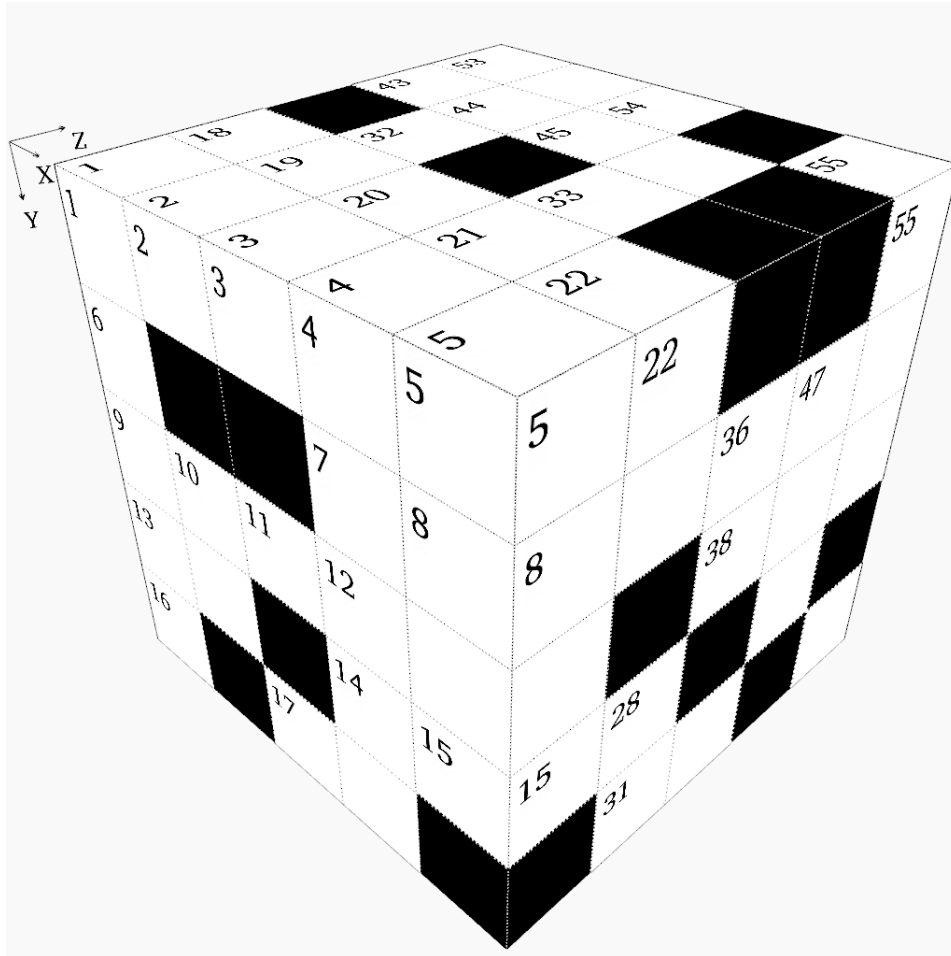


Difficulty: ★★★★★

Cube - Challenging Puzzle #38



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

43	44	45			53		54		55
46							56	57	
48			49				58		
50	51				59	60			
		52				61			

X Direction

- 1 A prime number
- 7 Mean of Z12 and Z43
- 9 Four times a prime number
- 13 Z30 plus Z43
- 14 Z31 minus Y28
- 17 X53 minus half of X29
- 18 Last two digits are the same as last two digits of Z9
- 23 X41 minus half of Z49
- 26 Twenty times a prime number
- 27 A prime number
- 29 Y60 plus Y19
- 34 Twice a prime number
- 37 Y32 plus Y36
- 39 Y28 reversed
- 41 Ninety times a prime number
- 43 Y35 minus X56
- 46 Mean of X17 and Z7
- 48 Two thousand nine hundred seventy-six more than Y44
- 50 Z8 minus X14
- 52 Mean of Y28 and Y22
- 53 X46 minus Z45
- 56 Seven times a prime number
- 58 Z15 times Y40
- 59 Twelve times a prime number
- 61 Eighty-four times a prime number

Y Direction

- 1 Mean of X1 and Z9
- 4 A prime number
- 5 A prime number
- 10 X13 plus Z31
- 18 A prime number
- 19 Mean of X56 and Y40
- 20 Eighty times a prime number
- 21 X59 minus Z25
- 22 Z45 plus X17
- 28 Y49 divided by seventy-four
- 32 Nine times Z3
- 33 Z15 minus Z43
- 34 Y44 plus Z1
- 35 X43 plus Y55
- 36 Mean of X7 and Z42
- 40 X7 minus Z31
- 43 A prime number
- 44 Y34 minus X52
- 45 Mean of Y4 and Z11
- 47 X53 plus Z24
- 49 Y32 plus X27
- 53 Half of X61, then subtract X26
- 54 Last two digits are the same as last two digits of Y19
- 55 Same as X56
- 57 Sixty-five times a prime number
- 60 Z4 divided by Y28

Z Direction

- 1 X17 minus Y40
- 2 Fifty-three times a prime number
- 3 A prime number
- 4 Thirteen times a prime number
- 5 X13 plus X39
- 6 Three times a square
- 7 Z38 plus Y10
- 8 A square
- 9 Seven times a prime number
- 10 Fifteen less than Y5
- 11 Nine times a prime number
- 12 Z51 plus X52
- 13 Twenty-two times a prime number
- 14 Sixteen times a prime number
- 15 Z31 plus X7
- 16 Two thousand five hundred thirty-one less than X50
- 17 Seven times a prime number
- 24 X56 plus Z42
- 25 Five times a prime number
- 27 First two digits are the same as first two digits of Z6
- 30 Mean of Z5 and Y28
- 31 Z49 minus X13
- 38 Z7 minus Z49
- 42 Y22 plus half of X13
- 43 Y36 minus Z15
- 45 Y40 plus X14
- 49 Mean of Z15 and Z42
- 51 Z12 minus Z1

Solution:

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

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