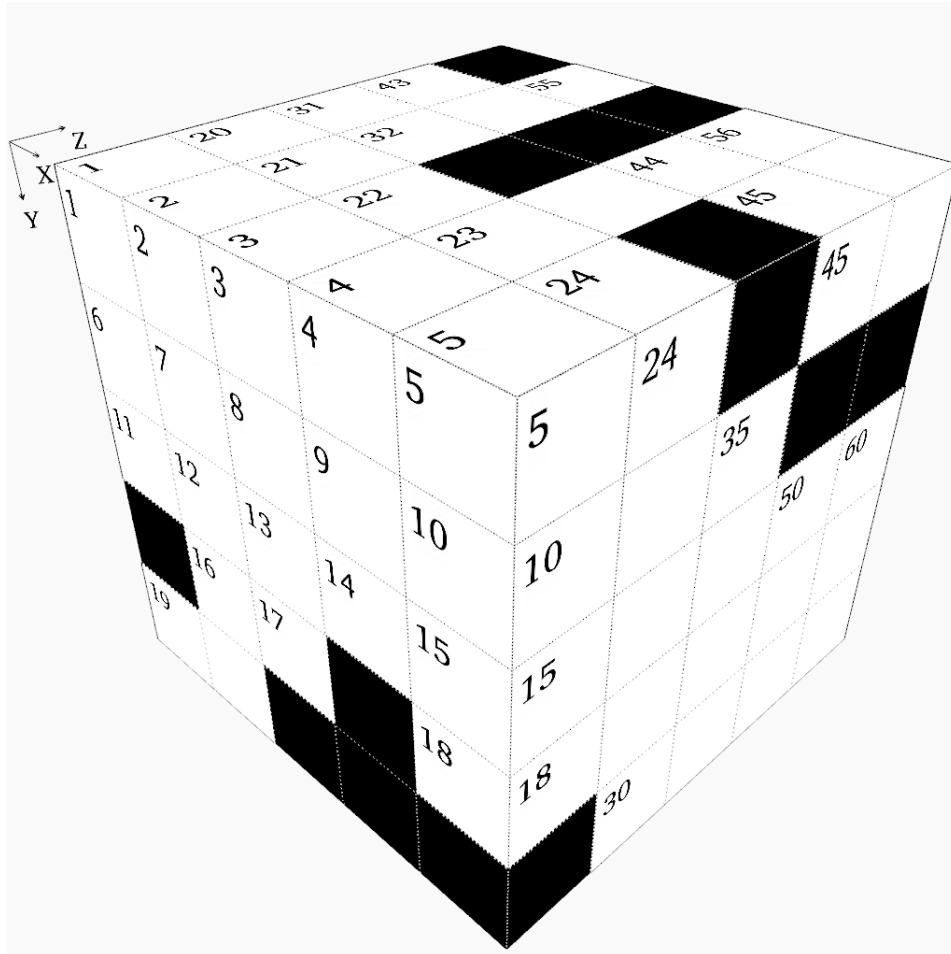


Difficulty: ★★★★★

Cube - Hard Puzzle #32



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

43			44	45	55		56	
46					57		58	
47	48		49	50	59			60
51			52			61	62	
	53	54			63			

X Direction

- 1 A prime number
- 6 Y35 plus Z14
- 11 Twice the result of Y22 minus Y3
- 16 Z54 plus X51
- 19 Mean of Y62 and X49
- 20 Seven thousand one hundred eighty-three more than X36
- 25 Four thousand forty-one less than Z18
- 26 Eighteen thousand two hundred fifty-six less than Y20
- 27 Mean of Z8 and Z9
- 28 Twice a prime number
- 31 Z3 plus Y62
- 33 Four times Z54
- 36 A palindrome
- 38 Y20 minus Y36
- 40 Y60 minus X59
- 42 Two-thirds of X52
- 43 X56 minus Y62
- 44 Z19 divided by Z54
- 47 Y23 minus Z9
- 49 Z5 minus Z3
- 51 X47 minus Z9
- 52 Y62 plus X44
- 53 Twice a prime number
- 56 X31 minus half of X19
- 57 A prime number
- 59 Mean of X40 and Z27
- 61 Thirty-four times X57
- 63 Seventeen thousand fifty-nine less than Z12

Y Direction

- 1 Y23 plus X19
- 2 Eighty times Z41
- 3 Z2 minus Y32
- 4 Y60 minus X43
- 5 Y50 times Z46
- 20 Twenty-two times a prime number
- 21 Y24 minus half of Z30
- 22 Seven hundred fifty more than X25
- 23 Z46 times X49
- 24 Four times a prime number
- 32 Rearranged digits of X63
- 34 A prime number
- 35 Four times a prime number
- 36 Mean of Z41 and Y34
- 37 Mean of Z39 and Z6
- 43 A prime number
- 44 Its digits total X16
- 48 Twice a prime number
- 50 Y5 divided by X51
- 55 Z4 plus X51
- 57 X33 divided by four
- 58 Eighteen times a prime number
- 60 A square
- 62 Mean of X52 and Z6

Z Direction

- 1 X61 minus Z41
- 2 X63 plus Z8
- 3 Z46 plus Y62
- 4 Y55 minus Z46
- 5 Mean of Y62 and X47
- 6 Z8 minus Z7
- 7 Y57 plus Z13
- 8 X59 plus X27
- 9 X49 plus Z5
- 10 Y34 plus Z45
- 11 Two thousand nine hundred less than Z2
- 12 A prime number
- 13 Z7 minus Z54
- 14 Three times a prime number
- 15 Seven times a prime number
- 16 Fifty-three times a prime number
- 17 X36 divided by Y37
- 18 First two digits are the same as X42
- 19 X59 plus X57
- 27 Three times a prime number
- 29 Z18 divided by Z6
- 30 Twenty-eight times a prime number
- 39 Twice the result of Y4 minus X33
- 41 Z10 plus X19
- 45 Mean of X57 and Z5
- 46 X56 minus Z5
- 54 X16 minus Z46

Solution:

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

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