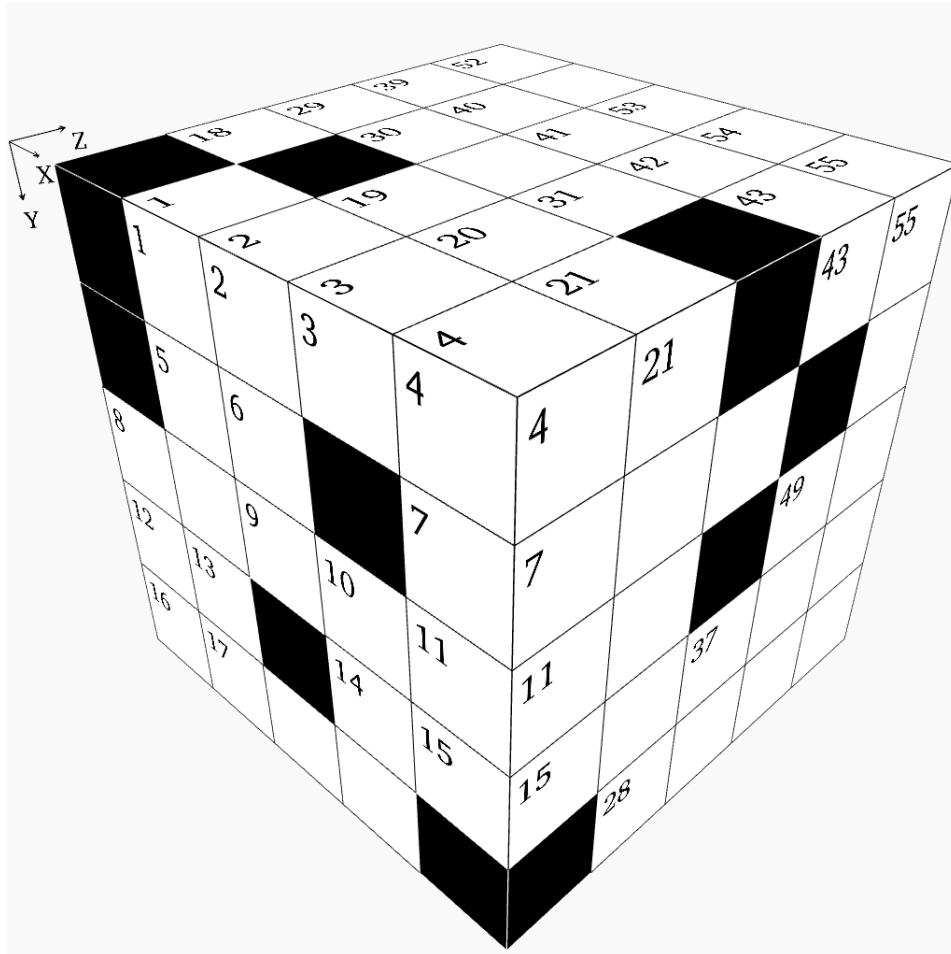


Cube - Hard Puzzle #43



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

39	40	41	42	43	52	53	54	55
44		45				56		
46	47		48	49	57	58	59	
50					60	61		
			51		62			

X Direction

- 1 X16 minus Z51
- 5 Y37 reversed
- 8 Five times a prime number
- 12 Mean of Z11 and Z43
- 14 Z45 plus Z43
- 16 X1 plus X32
- 19 Y49 minus Y10
- 22 Y40 minus X33
- 24 Y8 minus X12
- 25 Thirty-six times a prime number
- 29 Six times a prime number
- 32 Mean of Z10 and X51
- 33 Half of X59
- 35 A prime number
- 38 Mean of Y31 and Y10
- 39 Twice a prime number
- 44 Y39 plus half of Z28
- 46 Twice a prime number
- 50 Sixty-four times a prime number
- 51 Z48 minus Y37
- 52 Mean of Z12 and Z27
- 56 Mean of X60 and Y10
- 57 Y30 reversed
- 59 Mean of X14 and Z6
- 60 Thirty-three less than Y49
- 62 Five thousand thirty more than Z17

Y Direction

- 1 X25 minus Y41
- 2 Nineteen times Z45
- 4 X38 plus half of Z22
- 8 Rearranged digits of X38
- 10 Twice the result of X46 minus X8
- 18 A prime number
- 19 A square
- 20 Y18 minus X19
- 21 Eleven times a prime number
- 26 Mean of X59 and Y31
- 29 A prime number
- 30 X57 reversed
- 31 Mean of X32 and Y26
- 34 Z3 divided by Y53
- 36 Twice the result of Y37 plus Z4
- 37 X14 minus Y26
- 39 Seven times a prime number
- 40 Eight thousand six hundred twenty-two more than Z3
- 41 Four hundred seventy-four less than Z18
- 42 Fifty-seven times a prime number
- 49 Eleven times X51
- 52 Half of X50, then subtract Y55
- 53 X12 plus X57
- 54 Four times a prime number
- 55 Twice a prime number
- 58 Y54 minus Z47
- 61 X32 minus Z45

Z Direction

- 2 X39 plus Z23
- 3 Ten thousand six hundred sixty more than Z12
- 4 X5 minus X59
- 5 One thousand five less than Z18
- 6 Y30 minus X5
- 7 X56 minus X59
- 8 Y26 plus half of X25
- 9 X5 times Y61
- 10 X29 minus Z5
- 11 X51 minus X33
- 12 Thirteen thousand six hundred twenty-eight less than Z17
- 13 Eighteen thousand sixty-eight more than Y29
- 14 X59 plus X16
- 15 Seven thousand two hundred eighty more than X50
- 17 Twice a prime number
- 18 Ninety-three times Z48
- 22 Four times a prime number
- 23 Mean of Y20 and Z6
- 27 Eight hundred eighty-two less than Z14
- 28 Eighty-one times Y36
- 30 Twice a prime number
- 43 Mean of X33 and Y31
- 45 A cube
- 47 X14 minus X59
- 48 X19 minus Y53
- 49 Z6 plus X14
- 51 Same as X32

Solution:

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

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