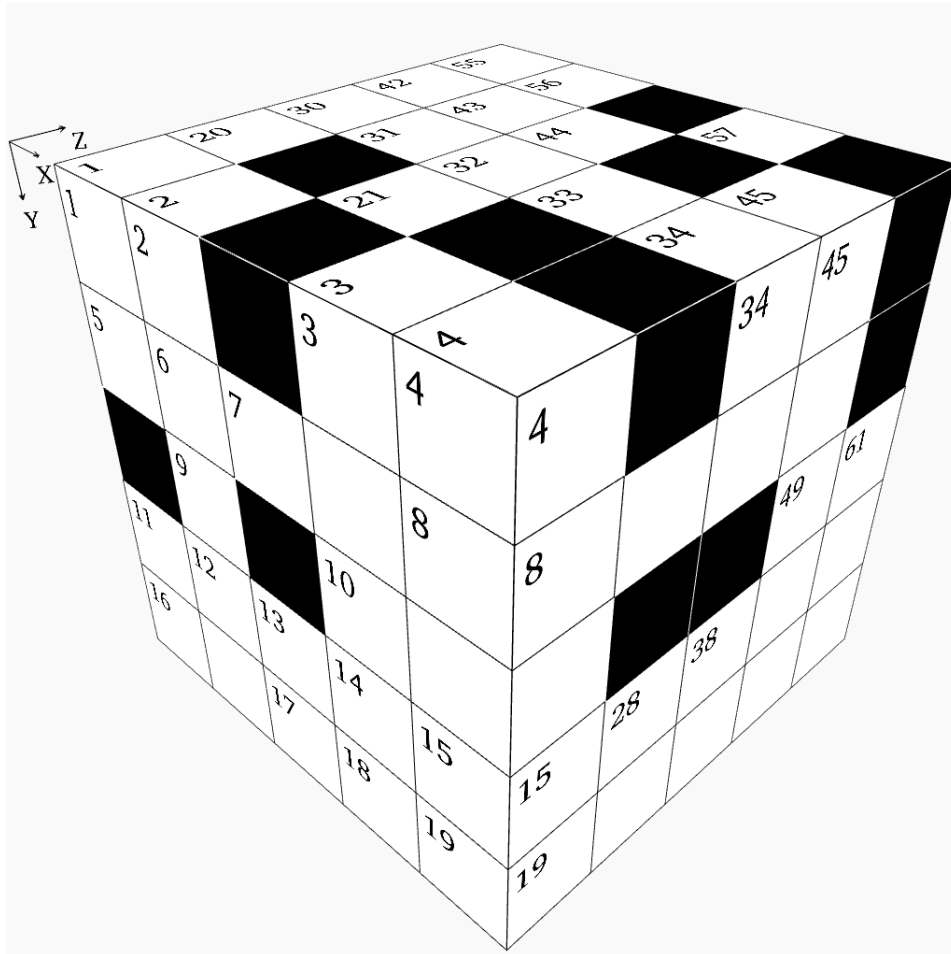


Cube - Hard Puzzle #50



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	20		21			30	31	32	33	34
5	6	7		8	22	23				35				
	9		10		24		25	26			36			
11	12	13	14	15	27				28	37				38
16		17	18	19			29			39	40			41

42	43	44		45	55	56		57	
46						58	59		
	47		48	49	60				61
50		51	52			62			
53			54		63				

X Direction

- 1 Z52 minus Y50
- 3 Two-fifths of X37
- 5 X29 times Y28
- 10 Y38 plus Y28
- 11 Seventeen times a prime number
- 16 Six thousand eight hundred sixty-six less than Z1
- 22 Same as X42
- 24 Mean of Z8 and Y59
- 27 Forty-four times a prime number
- 29 Y48 minus X10
- 30 X42 times Y32
- 35 Twenty-one times a prime number
- 36 Twice a prime number
- 37 Y13 minus Y42
- 39 A square
- 41 Mean of X53 and X42
- 42 Half of X46, then subtract Y38
- 46 Eleven times X3
- 47 Four times a prime number
- 50 Eight times a prime number
- 53 Same as X1
- 54 Y3 minus half of X63
- 55 Three times X39
- 58 Consecutive digits in descending order
- 60 Eleven times a prime number
- 62 Last two digits are the same as last two digits of Z15
- 63 Four hundred forty-three more than X60

Y Direction

- 1 Twice the result of Z34 minus Z49
- 2 Mean of X60 and Y48
- 3 Y2 minus Z52
- 4 A prime number
- 11 Z51 plus X39
- 13 Y26 minus Z17
- 20 A prime number
- 21 Twice the result of Y57 minus Y23
- 23 Twenty-eight times a prime number
- 26 Y13 plus half of Z14
- 28 Y26 minus X10
- 30 Z14 minus Y38
- 31 X50 minus Y4
- 32 X30 divided by X22
- 33 A square
- 34 X54 minus Y42
- 37 Mean of Z14 and X54
- 38 X5 divided by X29
- 42 X54 minus Z34
- 43 Four thousand seven hundred fifty-two less than Y3
- 44 Half of Z11, then subtract Y30
- 45 Twenty-three thousand two hundred two more than Z15
- 48 Nineteen times a prime number
- 50 Z34 minus Z17
- 56 Z18 plus X53
- 57 Twice a prime number
- 59 Five times a prime number
- 61 Eighteen times a prime number

Z Direction

- 1 X58 plus half of Z15
- 5 Fifty-one times Y28
- 6 Four thousand four hundred three less than Y45
- 7 Twenty thousand three hundred eighty-eight less than Y21
- 8 Z25 plus Z17
- 9 Eighty-three times a prime number
- 10 Eleven thousand one hundred seventeen less than X35
- 11 Eight times a prime number
- 12 Seven thousand nine hundred fifty-five less than X11
- 13 Y26 minus Z51
- 14 Z31 minus Z49
- 15 Five thousand one hundred six less than X63
- 16 Mean of Y43 and X16
- 17 A square
- 18 Y56 minus X1
- 19 Six times a prime number
- 21 Eleven times X41
- 25 Seven times a prime number
- 31 X54 plus Y38
- 34 Mean of X42 and X39
- 40 Mean of X58 and Z13
- 49 Z17 reversed
- 51 Mean of X1 and Y38
- 52 Y32 minus X41

Solution:

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

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