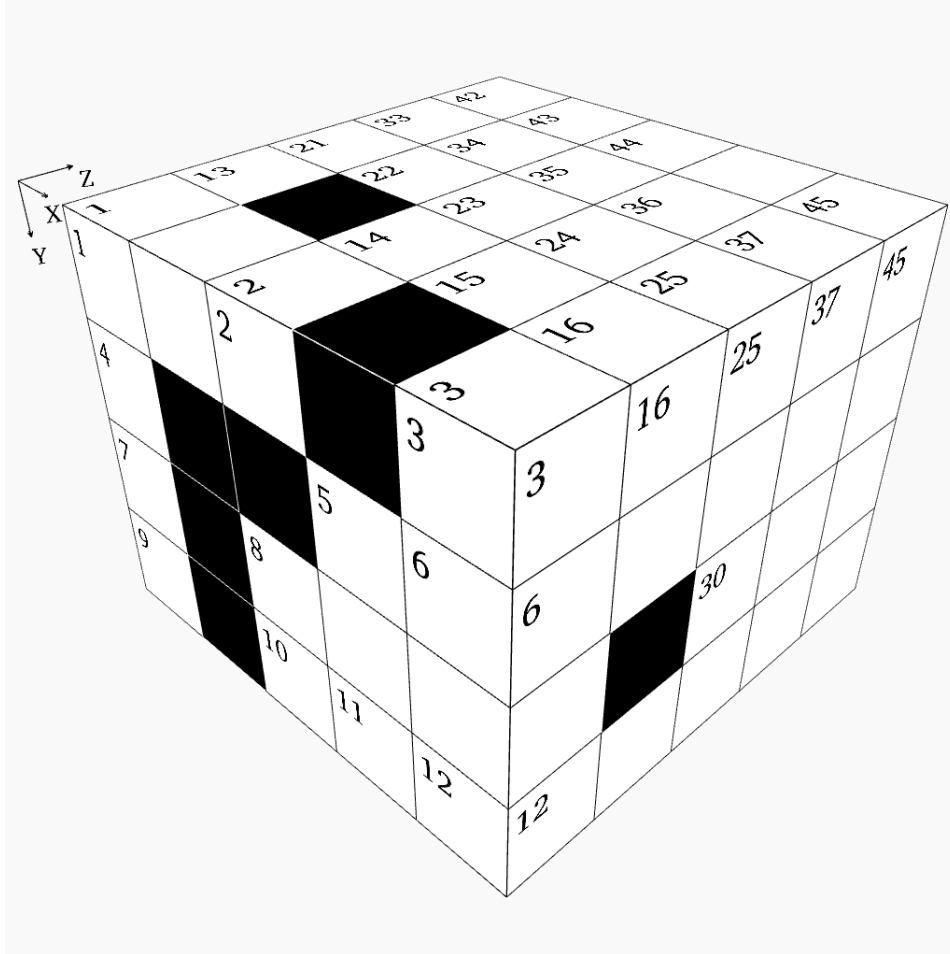


Box - Hard Puzzle #47



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

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

33	34	35	36	37	42	43	44		45
38					46				
39			40		47			48	
	41				49				

X Direction

- 1 Twice the result of Y5 plus Z32
- 5 X48 minus Y15
- 8 X10 minus X47
- 10 Z22 minus X46
- 14 Twice the result of Z3 minus X38
- 17 Mean of Z1 and Y42
- 20 Mean of Y43 and Y48
- 21 Eight times a prime number
- 26 X20 times Y48
- 27 First two digits are the same as first two digits of Z29
- 31 A prime number
- 33 Z2 plus half of Y37
- 38 Fifty-three times a prime number
- 39 Half of Z9, then subtract Z29
- 40 Y14 divided by Z28
- 41 Mean of Z19 and Z30
- 42 Six thousand one hundred two more than X33
- 46 A prime number
- 47 X40 plus X5
- 48 Mean of X39 and Y16
- 49 Twice a prime number

Y Direction

- 1 X27 minus Y43
- 3 Z10 minus half of Z12
- 5 Seven times a prime number
- 8 Y16 minus X39
- 13 Seven times X20
- 14 Two hundred fifty-two more than Z18
- 15 Mean of X47 and X40
- 16 Z28 minus Y44
- 21 Thirty-four times a prime number
- 22 Sixty-eight times a prime number
- 23 Seventeen times a prime number
- 24 Consecutive digits unordered
- 25 Three times a prime number
- 33 X26 divided by fifty-two
- 34 Consecutive digits unordered
- 35 X40 plus X39
- 36 A prime number
- 37 Four times a prime number
- 42 Last three digits are the same as last three digits of Y23
- 43 Ninety times a prime number
- 44 Y8 plus X48
- 45 X10 times X5
- 48 Consecutive digits in ascending order

Z Direction

- 1 A prime number
- 2 Nine thousand one hundred less than X42
- 3 Twelve thousand four hundred ninety-one more than Z12
- 4 Twice a prime number
- 5 Rearranged digits of Y24
- 6 Mean of X42 and Y24
- 7 Its digits total Y8
- 8 X14 minus Y8
- 9 X5 plus X10
- 10 A prime number
- 11 Twenty-eight times a prime number
- 12 First two digits are the same as X47
- 15 Forty-six times a prime number
- 18 Eighty-five times a prime number
- 19 One thousand nine hundred eighty-one less than Y21
- 22 A prime number
- 28 Mean of Y48 and Z32
- 29 Half of Z32
- 30 Z9 plus Y44
- 32 Ten times a prime number

Solution:

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

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