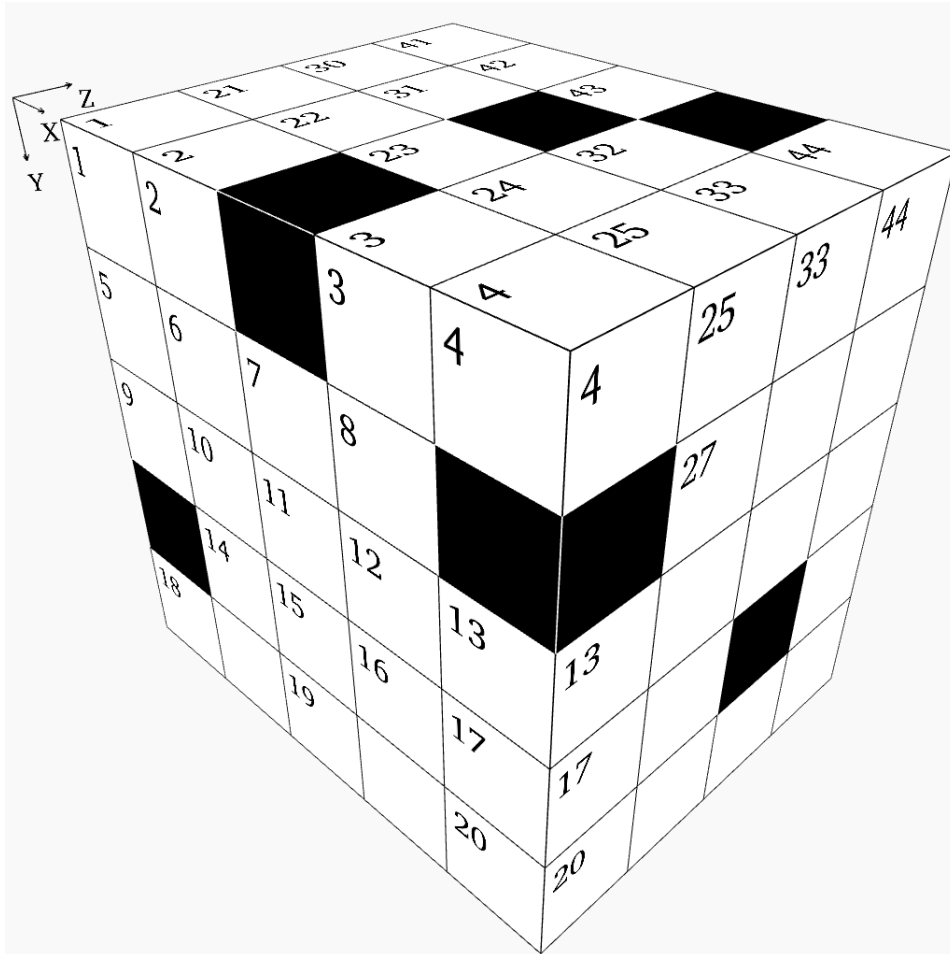


Box - Hard Puzzle #49



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	4	21	22	23	24	25	30	31		32	33
5	6	7	8		26				27	34		35		
9	10	11	12	13	28					36			37	
	14	15	16	17	29									
18		19		20						38	39		40	
					41	42	43		44					
					45									
					46			47						
					48									
						49								

X Direction

- 1 Same as Z39
- 3 Same as Z17
- 5 Two hundred twenty-seven less than Z4
- 9 Five times a prime number
- 14 Nineteen times a prime number
- 18 A prime number
- 21 Three times a prime number
- 26 Consecutive digits unordered
- 28 Rearranged digits of Y43
- 29 Twice a prime number
- 30 All digits are the same
- 32 Twice a prime number
- 34 Seventeen times a prime number
- 36 Half of Y3, then subtract Z13
- 38 Y42 minus half of Y37
- 41 Twenty-four times a prime number
- 45 Three-fifths of Y47
- 46 Eleven times a square
- 48 A prime number
- 49 Twenty-three times a prime number

Y Direction

- 1 A prime number
- 2 Y43 minus Z1
- 3 Ten times a prime number
- 7 Nine times a prime number
- 13 Y47 reversed
- 21 Ninety-four times a square
- 22 One thousand seven hundred forty-eight less than Z1
- 23 Y21 minus Y24
- 24 A prime number
- 25 Four times a prime number
- 30 Twice the result of Y25 plus X14
- 31 Twice the result of Z3 minus Z27
- 33 A prime number
- 35 Z18 divided by seven
- 37 Sixteen times a prime number
- 41 A prime number
- 42 Forty-nine times a prime number
- 43 A prime number
- 44 Last two digits are the same as last two digits of Y41
- 47 Fifteen times a prime number

Z Direction

- 1 A prime number
- 2 Twice the result of X21 minus Y44
- 3 Twenty-four times Y35
- 4 Z12 minus Z29
- 5 Fourteen times a prime number
- 6 Seventy-one times a prime number
- 7 Z17 plus Z9
- 8 X41 minus Z14
- 9 Z7 minus X3
- 10 Mean of Z16 and Z8
- 11 Y22 plus X45
- 12 A prime number
- 13 Eighty-eight times a prime number
- 14 Y35 plus X30
- 15 Y31 divided by six
- 16 Three times a prime number
- 17 Twice a prime number
- 18 Half of Z5, then subtract Z19
- 19 Twenty-one times a square
- 20 Twenty-nine times a prime number
- 27 Seven times Z14
- 29 A prime number
- 39 All digits are the same
- 40 Y31 minus X45

Solution:

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