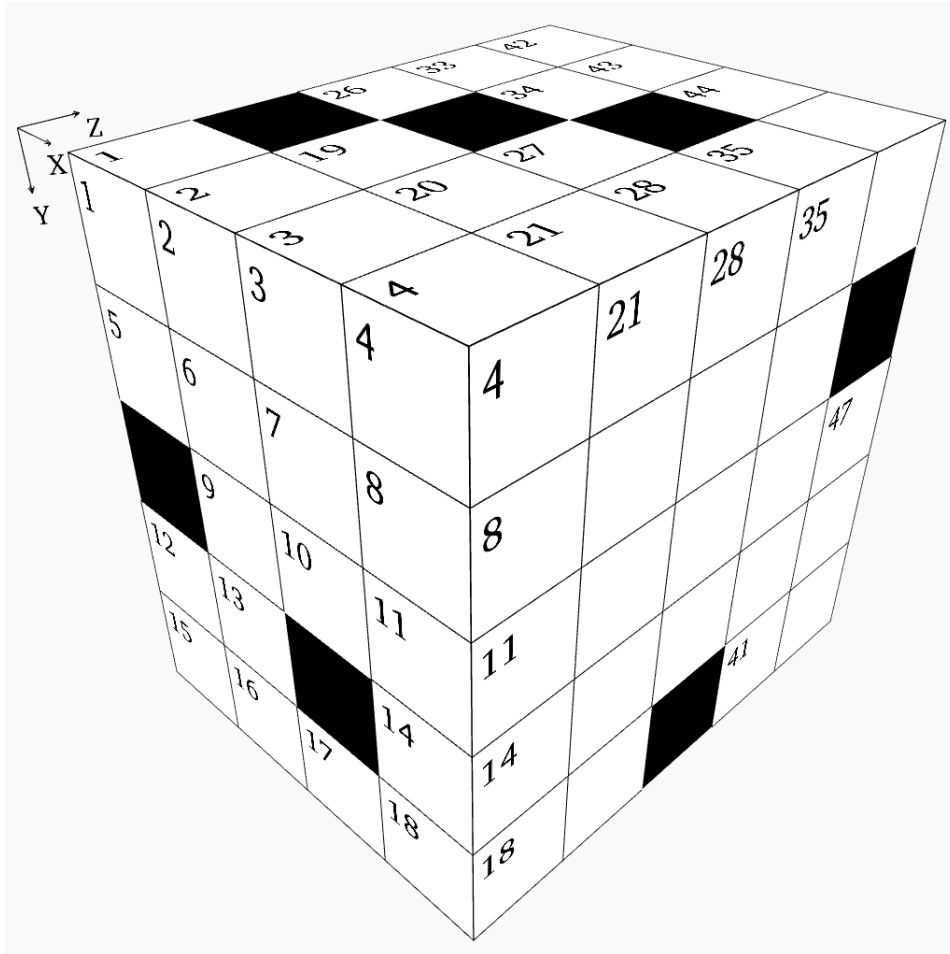


Box - Hard Puzzle #21



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

X Direction

- 1 Eleven times a prime number
- 5 X37 minus X40
- 9 Y33 minus X46
- 12 A square
- 15 Z14 divided by Z34
- 19 X45 plus Y12
- 22 Three times a prime number
- 23 Seventeen times a prime number
- 24 Z26 divided by X36
- 25 X1 minus Z36
- 27 Z41 reversed
- 29 Z34 plus Z36
- 30 X33 minus Z18
- 31 Y43 divided by X36
- 33 A square
- 36 Z7 minus Z16
- 37 Seventy-eight times a prime number
- 39 Eighteen times a prime number
- 40 Z15 minus Y30
- 42 X48 reversed
- 45 Z3 minus Z7
- 46 A prime number
- 48 Four times a prime number
- 49 A prime number

Y Direction

- 1 Z26 divided by X30
- 2 Nine times a prime number
- 3 Same as Z15
- 4 Forty-four times a prime number
- 12 X15 divided by thirty-eight
- 19 First two digits are the same as first two digits of Z6
- 20 Five times a prime number
- 21 Sixty-four times a prime number
- 22 Thirty-eight times a prime number
- 26 Thirteen times a prime number
- 28 Three times a prime number
- 30 Y3 minus X40
- 33 X27 plus X37
- 35 Five times a prime number
- 36 Twice the result of Z8 minus X27
- 38 Twice the result of X49 minus X22
- 42 Mean of Y26 and Z15
- 43 X31 times Z38
- 44 Twice a prime number
- 47 Twenty-three times a prime number

Z Direction

- 2 X24 minus Z34
- 3 X45 plus X12
- 4 Sixteen thousand eight hundred seventy-four more than Y35
- 5 Twenty-eight times a prime number
- 6 A prime number
- 7 A square
- 8 Twice a prime number
- 9 Y12 plus X24
- 10 Twice the result of Y44 plus Y21
- 11 Mean of Y35 and X29
- 12 A prime number
- 13 Six times a prime number
- 14 First two digits are the same as Y38
- 15 A prime number
- 16 X12 minus Z38
- 17 Three thousand six hundred thirty-three less than Z12
- 18 X36 plus Z38
- 23 Y33 plus half of Z2
- 26 X24 times Z38
- 32 Thirty-eight times a prime number
- 34 Z41 minus Z36
- 36 Mean of Z7 and Z34
- 38 Z7 minus Z16
- 41 Z9 minus X27

Solution:

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

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