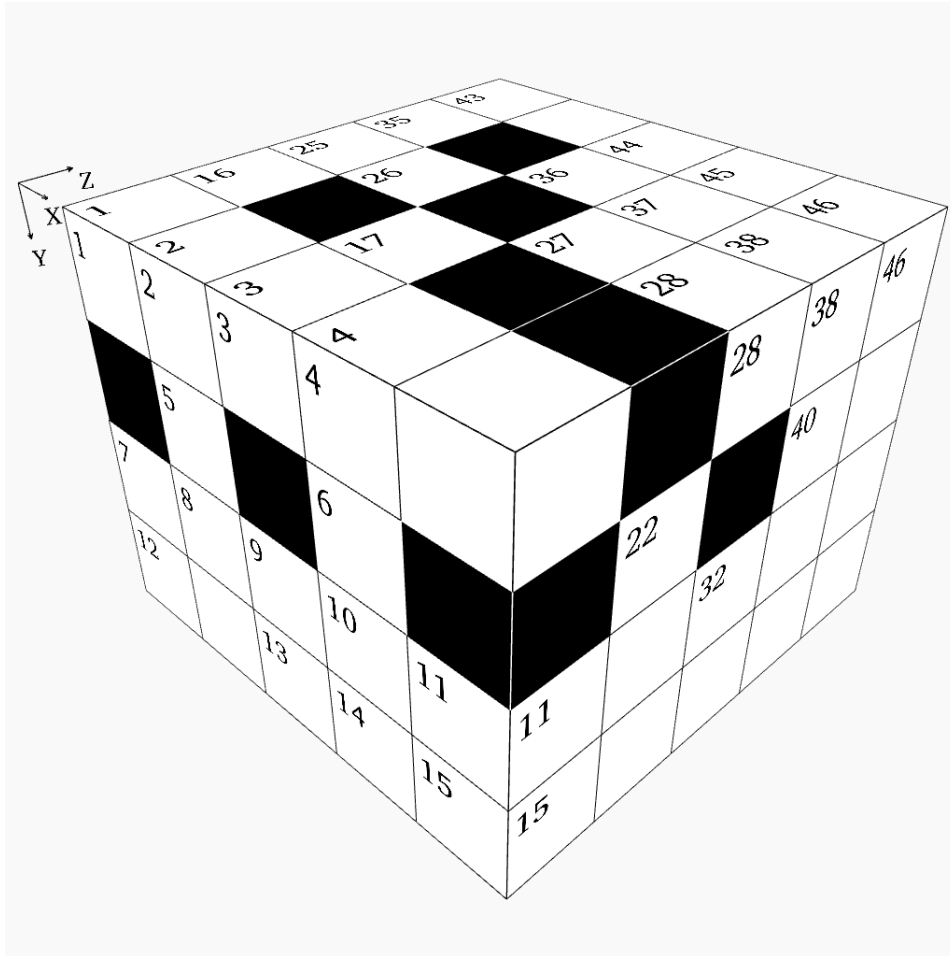


Box - Hard Puzzle #39



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

35		36	37	38	43		44	45	46
39				40			47		
		41			48	49			
42					50				

X Direction

- 1 Two thousand eight hundred eighteen less than Z1
- 7 Y21 times Z40
- 12 Nine thousand seven hundred fifty more than Z1
- 18 Nine times a prime number
- 23 Last two digits are the same as last two digits of Y21
- 24 Mean of Y38 and Y45
- 25 A prime number
- 27 Y7 plus Y9
- 29 Mean of Y16 and Y22
- 31 X27 plus Z8
- 33 Twice a prime number
- 36 Twenty-one times a prime number
- 39 Six times a prime number
- 41 Forty-two times a prime number
- 42 Mean of Z27 and Y19
- 43 A palindrome
- 47 Forty-three times Y32
- 48 Y43 minus Y2
- 50 A prime number

Y Direction

- 2 Z20 plus half of Y35
- 4 Y44 reversed
- 7 Y30 minus X31
- 9 Two-thirds of Z3
- 11 Y45 plus Y7
- 16 One thousand three hundred fifty-four more than Z18
- 17 Half of Y25, then subtract Y26
- 19 Z40 minus Y7
- 21 Mean of X42 and X47
- 22 Z3 plus X25
- 25 Eight times a prime number
- 26 Seven times a prime number
- 27 Three times Y7
- 30 Mean of Y38 and X27
- 32 Sum of digits in Z11
- 35 Twenty-four times Z28
- 36 Six times a prime number
- 37 A prime number
- 38 A prime number
- 43 Y36 plus Y49
- 44 Five times a prime number
- 45 A prime number
- 46 Five hundred sixty-seven more than Y4
- 49 X24 divided by fourteen

Z Direction

- 1 Two thousand eight hundred ninety-nine more than Z6
- 3 X1 minus Z6
- 5 Twenty-nine times a prime number
- 6 Five thousand five hundred sixteen more than X18
- 7 Twice a prime number
- 8 X41 minus X25
- 9 Consecutive digits unordered
- 10 Mean of Y27 and Y49
- 11 Nine times a prime number
- 12 Eighteen thousand seven hundred eighteen more than X50
- 13 X39 minus half of Z18
- 14 A prime number
- 15 X43 minus half of X41
- 18 Twice a prime number
- 20 A prime number
- 27 A prime number
- 28 Mean of Y37 and X25
- 34 Three times a prime number
- 36 Mean of Z10 and Y9
- 40 Z3 minus Y45

Solution:

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

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