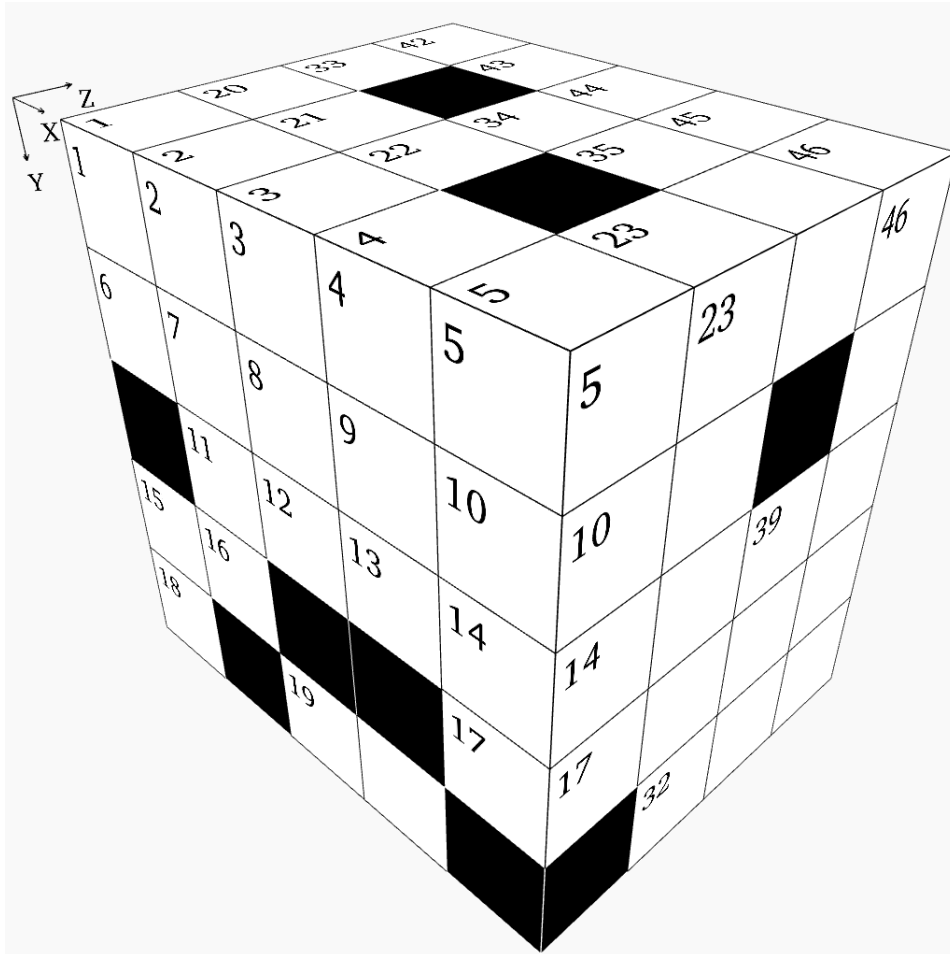


Difficulty: ★★★★★

Box - Hard Puzzle #6



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

X Direction

- 1 Seven times a prime number
- 6 Three times a prime number
- 11 A prime number
- 15 Mean of Z10 and Z35
- 19 Twice a prime number
- 20 Z10 plus X30
- 24 X47 minus Y4
- 26 Twice a prime number
- 27 Thirteen times a prime number
- 30 Twice a prime number
- 34 Y44 reversed
- 36 Mean of Z13 and Z26
- 38 Three thousand eight hundred fifty less than X1
- 40 Sixteen thousand four hundred eighty-three less than X38
- 41 Five times a prime number
- 42 Twice a prime number
- 47 A prime number
- 48 Nine thousand eight hundred thirty-three less than Y21
- 49 Y3 divided by three

Y Direction

- 1 X15 plus Z35
- 2 Thirty-one times a prime number
- 3 Z5 minus Z1
- 4 Y5 minus Z5
- 5 Thirty-five times Y3
- 15 X34 minus Z31
- 20 Five thousand four hundred ninety-eight more than Y22
- 21 Y44 times X49
- 22 First two digits are the same as Z35
- 23 Fifty-five times a prime number
- 25 Y39 minus X15
- 33 Last two digits are the same as last two digits of Z1
- 34 X6 plus Y2
- 35 A prime number
- 37 Six times a prime number
- 39 Five times a prime number
- 42 Twice the result of Y22 plus Z18
- 43 Five times a prime number
- 44 X34 reversed
- 45 Twelve times Y15
- 46 Four times a prime number

Z Direction

- 1 A prime number
- 2 A square
- 3 Eight times a prime number
- 5 Twice a prime number
- 6 Fourteen times a prime number
- 7 A prime number
- 8 First two digits are the same as first two digits of X38
- 9 Mean of Y45 and Z13
- 10 X34 minus Z35
- 11 Three times a prime number
- 12 Rearranged digits of Z16
- 13 Twice a prime number
- 14 Y37 minus X34
- 15 A prime number
- 16 Mean of Z7 and Z9
- 17 Z15 minus Y45
- 18 One thousand seven hundred three less than Y5
- 19 Twice the result of X40 minus Y23
- 26 A square
- 28 Mean of X15 and X49
- 29 Y43 minus Y5
- 31 Mean of Y1 and Z2
- 32 Y20 divided by X19
- 35 Y4 minus Y3

Solution:

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