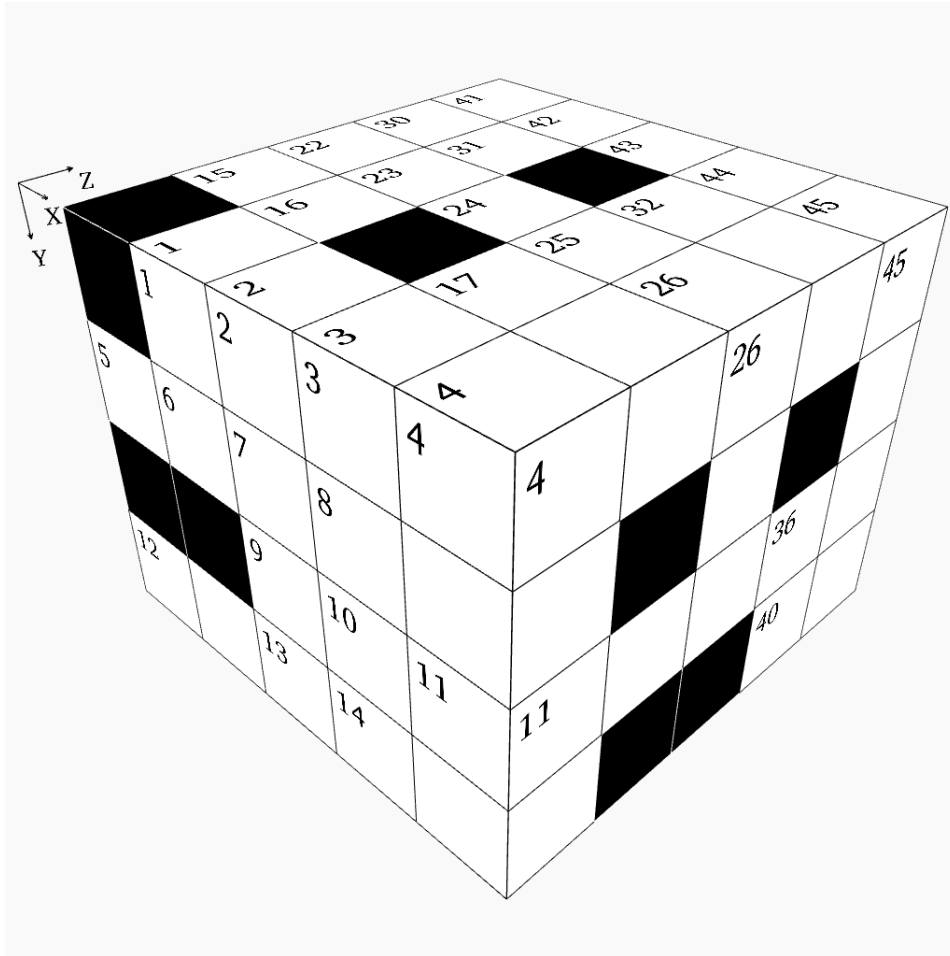


Box - Challenging Puzzle #67



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

X Direction

- 1 Twice a prime number
- 5 X20 times Y30
- 9 Z10 minus X12
- 12 A prime number
- 15 Mean of Y15 and X33
- 17 A square
- 18 Thirty-seven times a prime number
- 20 Mean of X32 and X30
- 21 Mean of Z13 and X15
- 22 A prime number
- 27 Mean of Z6 and X21
- 28 Mean of X22 and X17
- 30 A cube
- 32 X21 minus X20
- 33 Z38 minus Y36
- 34 Y3 plus half of X1
- 37 Six times a prime number
- 41 Two thousand nine hundred thirty-three more than X28
- 46 Y15 plus half of Z8
- 47 Seven hundred seventy-one more than X22
- 48 Twice X17

Y Direction

- 1 Z38 minus Y15
- 2 Forty-six times a prime number
- 3 Seventy-seven times Z28
- 4 Six hundred seventy-five more than Y42
- 15 Two-thirds of X21
- 16 Y31 divided by X15
- 17 Ninety-nine more than Y3
- 22 Z12 minus half of X37
- 23 Four times a prime number
- 24 Nine times a prime number
- 25 A prime number
- 26 Consecutive digits in ascending order
- 30 A prime number
- 31 X15 times X9
- 32 Sixty-one times X33
- 35 X15 plus X21
- 36 Half of Y44
- 41 Mean of X48 and Y45
- 42 Y23 times X32
- 43 Twice the result of Z15 minus Z7
- 44 A square
- 45 Forty times Z39

Z Direction

- 1 Twenty-five times a prime number
- 3 Fifteen thousand two hundred thirty-six more than Z1
- 4 Six thousand one hundred twelve less than Z8
- 5 A prime number
- 6 Two thousand five hundred one more than X37
- 7 Y23 minus X48
- 8 Twenty-eight times a prime number
- 10 Y16 plus X12
- 11 Eighteen times a prime number
- 12 A prime number
- 13 X20 plus X15
- 14 X48 times X30
- 15 A prime number
- 19 Seventy-five times Z13
- 28 Z11 minus half of Z4
- 29 Consecutive digits unordered
- 38 Two-thirds of Y44
- 39 Mean of X17 and Z13
- 40 X5 divided by Y30

Solution:

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

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