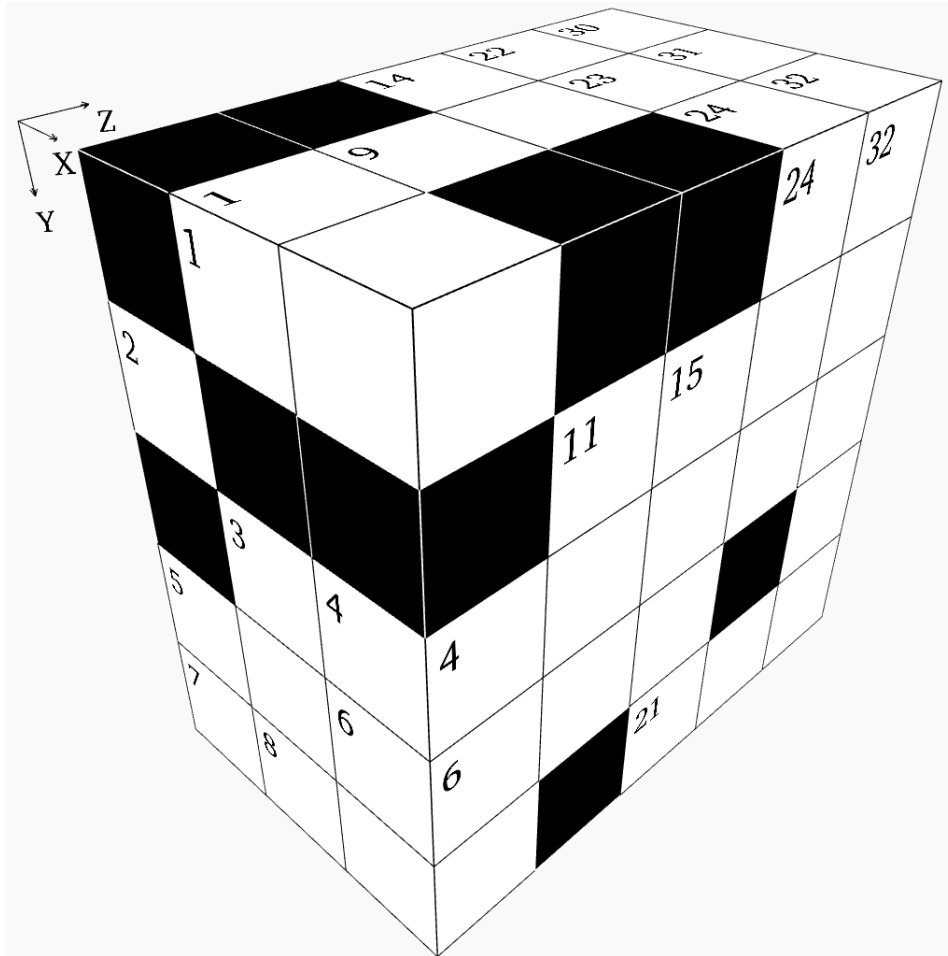


Box - Challenging Puzzle #51



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			9		14			22	23	24	30	31	32		
2			10		11			15	25	26		33			
3	4		12			16	17					34			
5		6				18	19		27	28		35			
7	8		13			20		21			29		36		

X Direction

- 1 Twice Z26
- 3 Y23 minus X14
- 5 X22 plus X1
- 7 Z7 plus Y30
- 10 Mean of X16 and Z6
- 12 Mean of X13 and X30
- 13 X36 minus Z12
- 14 Y30 plus X35
- 16 A prime number
- 18 Five times a prime number
- 20 Eighteen times X3
- 22 X30 plus X27
- 25 Mean of X33 and X12
- 27 Mean of X34 and Y30
- 29 Y31 divided by X20
- 30 Mean of X10 and Y10
- 33 X20 minus X29
- 34 Y9 minus Z18
- 35 X1 minus X13
- 36 Z7 minus Y30

Y Direction

- 3 X36 plus half of X13
- 4 Z12 minus Z24
- 5 X13 minus Z24
- 9 Mean of Y4 and Z18
- 10 Y23 minus Z24
- 11 X7 plus X34
- 14 A prime number
- 15 Y31 divided by nine
- 17 A prime number
- 22 Three times a prime number
- 23 Mean of Y9 and Z26
- 24 Mean of Y9 and X36
- 28 Y32 divided by Z3
- 30 Z24 plus X35
- 31 Y28 times X20
- 32 Z3 times X29

Z Direction

- 1 Fourteen thousand three hundred fifty-one more than Z2
- 2 Last two digits are the same as last two digits of Y31
- 3 Y11 minus Y30
- 4 Forty-four times Z3
- 6 X25 plus X33
- 7 Z4 divided by X14
- 8 Twenty-four times a prime number
- 11 A prime number
- 12 A prime number
- 14 Mean of X18 and X22
- 18 Z3 minus X25
- 19 Twice the result of Y24 plus Y11
- 21 Y31 divided by Y5
- 24 X3 reversed
- 26 Mean of X35 and X13

Solution:

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