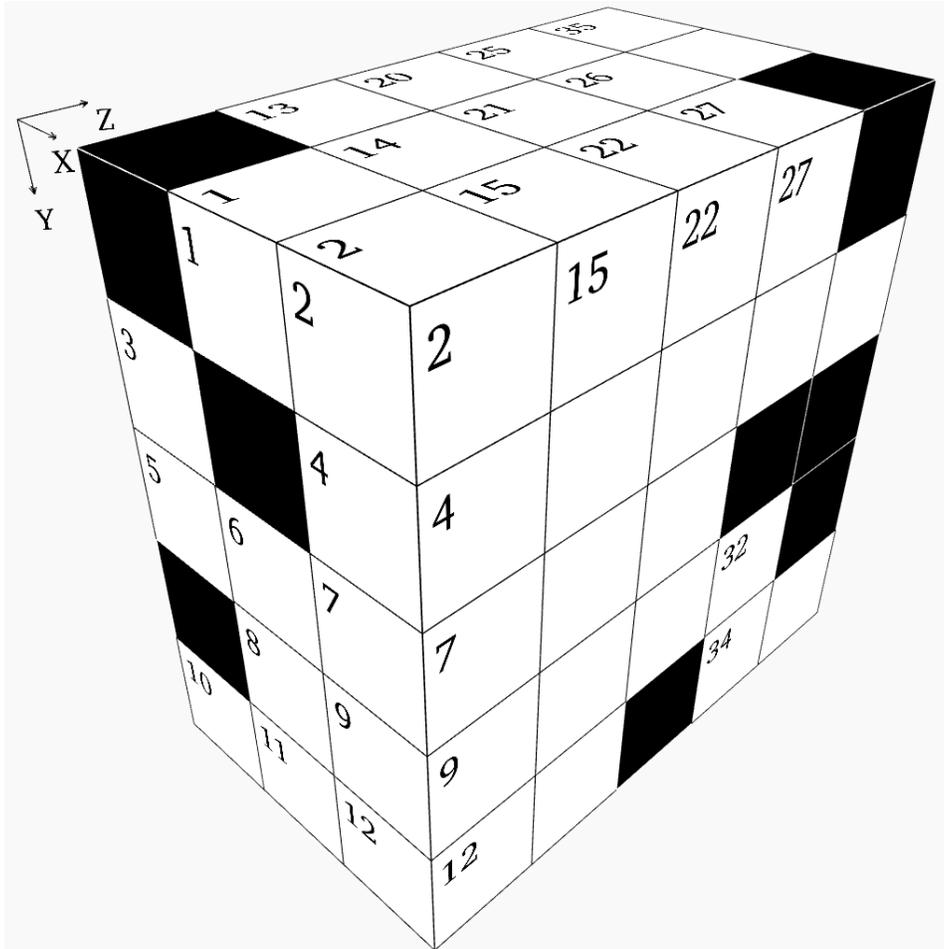


Box - Challenging Puzzle #20



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	13	14	15	20	21	22	25	26	27	35	
3		4		16		23				28			
5	6	7	17			24			29			36	
	8	9	18						30	31	32	37	38
10	11	12		19					33		34	39	

X Direction

- 1 Six times X37
- 5 X33 plus X23
- 8 X18 minus X25
- 10 A prime number
- 13 X39 minus Z33
- 16 X17 divided by twenty
- 17 Y36 minus Y3
- 18 X23 minus X24
- 19 X17 divided by six
- 20 Z31 times Y38
- 23 Twice the result of X25 plus Y29
- 24 X10 plus Z8
- 25 Mean of Z7 and X16
- 28 Y3 minus Z34
- 29 Same as Y38
- 30 Seven times Y27
- 33 X17 minus X35
- 35 Two-thirds of X30
- 37 Same as X28
- 39 Y3 plus X13

Y Direction

- 2 Twenty-one thousand nine hundred six less than Z11
- 3 Y27 plus Y38
- 6 X23 minus Y32
- 14 Six times a prime number
- 15 Nine thousand seven hundred eighty-five more than Z5
- 17 Mean of Y32 and Z12
- 20 Y6 times X29
- 21 X39 plus Z8
- 22 A prime number
- 26 First two digits are the same as X37
- 27 Z33 minus Y38
- 29 X24 minus X30
- 32 Three times X16
- 36 X17 plus Z33
- 38 Y17 minus X16

Z Direction

- 1 Last two digits are the same as last two digits of Y36
- 2 Eighty-four times a prime number
- 4 Z1 plus X35
- 5 Five times a prime number
- 6 Its digits total X16
- 7 Z12 plus X18
- 8 Y2 divided by X13
- 9 Z11 divided by X37
- 11 Z9 times X28
- 12 Y27 minus X37
- 13 Fifty-one times a square
- 16 A prime number
- 18 Nine times a prime number
- 31 Z8 minus Y3
- 33 Z34 plus X37
- 34 A cube

Solution:

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