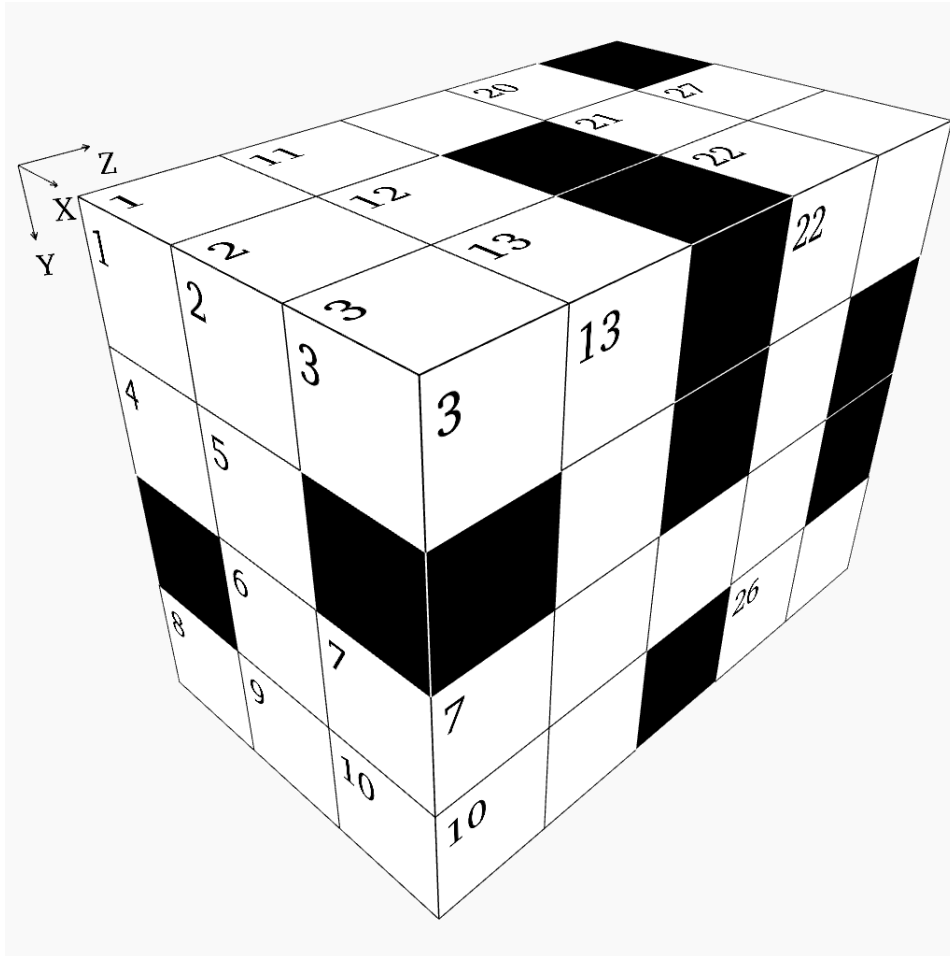


Box - Challenging Puzzle #48



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	11	12	13				20	21	22		27	
4	5		14				17							
	6	7	15			18			23	24				
8	9	10	16			19			25		26	28		

X Direction

- 1 A square
- 4 X6 minus Z4
- 6 Y18 minus X19
- 8 Z2 plus Y1
- 11 A square
- 14 Five times a prime number
- 15 Z8 divided by X27
- 16 Three-fourths of X25
- 18 Sixteen times a prime number
- 19 Twice a square
- 20 Mean of X11 and Z15
- 23 Last two digits are the same as Z2
- 25 Eight times a prime number
- 27 Mean of Z4 and Z26
- 28 Y1 plus X16

Y Direction

- 1 X8 minus Y24
- 2 Consecutive digits unordered
- 7 X27 minus X4
- 11 First two digits are the same as first two digits of Y17
- 12 Sixty-six times a prime number
- 13 Twice the result of Z7 plus X14
- 17 X16 minus Z2
- 18 Three-fourths of Y24
- 20 Twice the result of Y27 minus Y22
- 22 Sixty-six times Y24
- 24 X16 minus Y17
- 27 Five times a prime number

Z Direction

- 1 X25 times Z3
- 2 Same as Y24
- 3 X6 minus X4
- 4 Z1 divided by X25
- 5 X4 times X6
- 6 Last two digits are the same as Z2
- 7 Forty-four times Z26
- 9 Last two digits are the same as last two digits of Y27
- 10 Z26 plus half of X19
- 15 Rearranged digits of X18
- 21 Three times a square
- 22 Mean of X6 and X27
- 26 Z4 plus Y24

Solution:

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