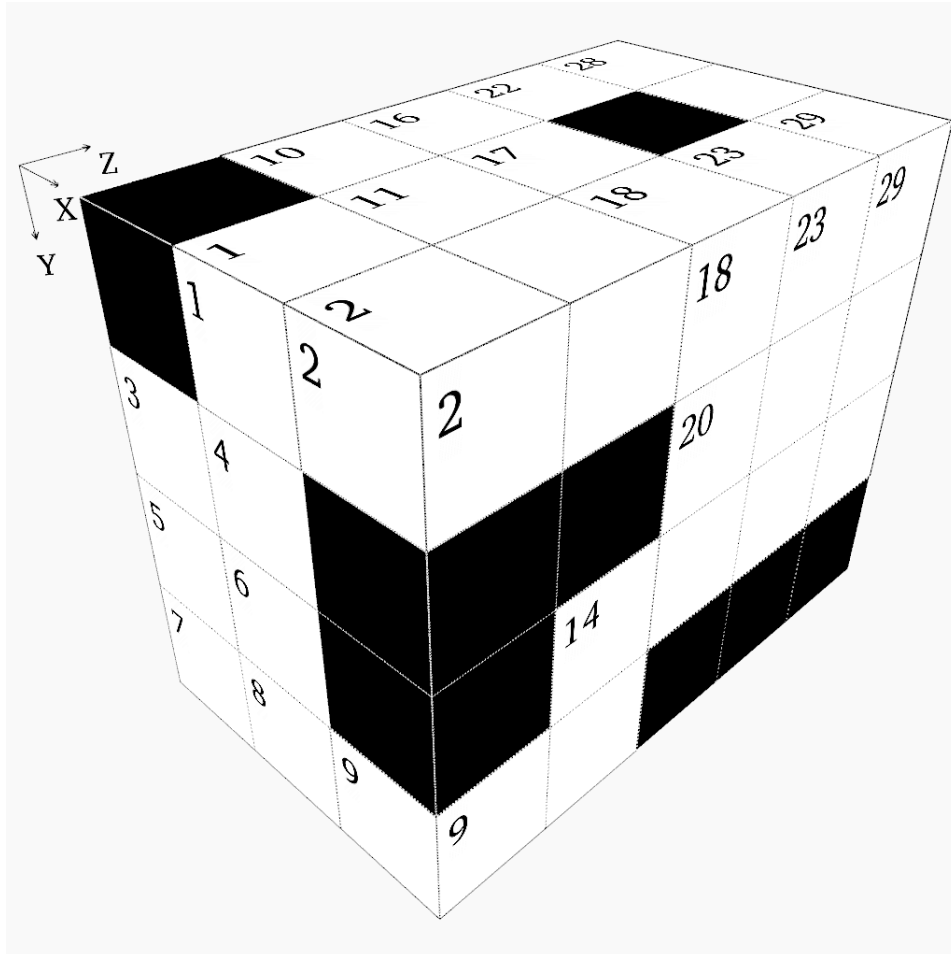


Difficulty: ★★★★★

Box - Challenging Puzzle #3



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

X Direction

- 1 A cube
- 3 X28 minus Y3
- 5 A prime number
- 7 Z7 plus Y26
- 10 Mean of Z9 and Z20
- 12 Y26 minus Y10
- 13 X7 minus Z7
- 15 Y23 minus X27
- 16 Twice the result of X10 minus Z24
- 19 Three times Z7
- 21 Fifteen times a square
- 25 Y31 times X1
- 27 Z3 minus Z24
- 28 One hundred thirty-four less than Y23
- 30 Three times a prime number
- 32 X25 divided by X1

Y Direction

- 1 Seven times a prime number
- 3 Mean of X30 and Y29
- 10 X13 minus X12
- 11 Forty-five times a prime number
- 14 Mean of Y10 and X3
- 17 Z14 minus X19
- 18 Y29 plus Y26
- 22 Z10 minus X27
- 23 One hundred fifty-four more than X21
- 26 Same as X13
- 28 A prime number
- 29 Y18 minus X13
- 31 Same as X32

Z Direction

- 1 Twice a prime number
- 2 Five times a prime number
- 3 Twice Z27
- 4 Y29 minus Z3
- 6 A prime number
- 7 Y14 minus X1
- 8 Eighty-seven times a prime number
- 9 A square
- 10 Y22 plus half of X12
- 14 A prime number
- 20 Y29 minus Z3
- 21 X30 minus Z27
- 24 Mean of Y31 and X1
- 27 Mean of X27 and Z24

Solution:

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