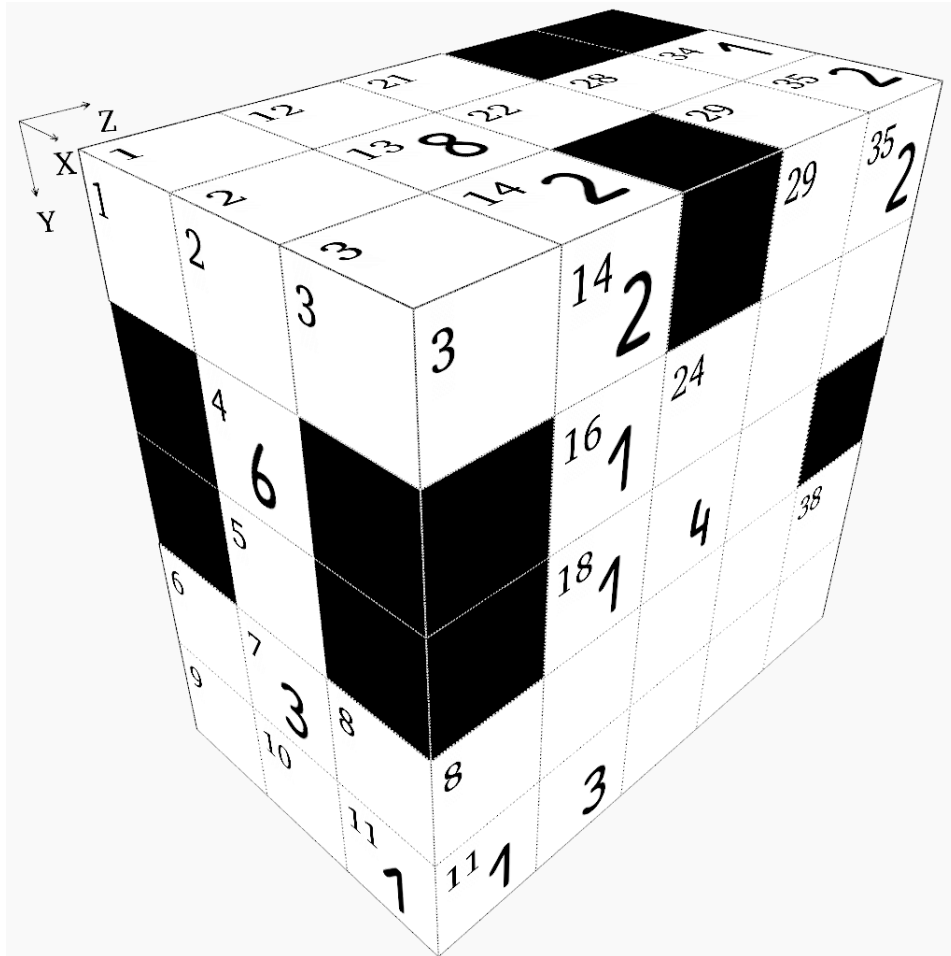


Difficulty: ☆☆☆☆☆

Box - Beginner Puzzle #17



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	12	13	14	21	22			28	29		34	35
				8	2								1	2
	4	6	15		16	23		24	30				36	8
	5		17	2	8	18	25		4					
6	7	3	19				26		31	32		37	8	1
9	10	11	20	1		3	27	6	33			39	6	

X Direction

- 1 X23 minus Z29
- 6 X23 minus Z31
- 9 Z18 plus X15
- 12 X23 plus X15
- 15 X39 minus X26
- 17 X31 minus X28
- 19 Mean of Y37 and Y24
- 20 X34 plus X23
- 21 X26 minus Y35
- 23 X25 minus X33
- 25 Z29 times X34
- 26 Three times Y8
- 27 Rearranged digits of Y21
- 28 Z16 divided by Y35
- 30 Y2 minus half of Z8
- 31 Twice the result of Y21 minus X33
- 33 Three-fourths of X39
- 34 Y21 minus X39
- 36 X23 minus Y37
- 37 Fifty-one times Y6
- 39 Four times a prime number

Y Direction

- 2 Fifteen times a square
- 6 A square
- 8 X12 minus X9
- 12 Three times a prime number
- 13 First two digits are the same as first two digits of X37
- 14 Forty-three times a prime number
- 21 Rearranged digits of Z1
- 22 Five thousand four hundred twenty-eight more than Y13
- 24 Four times a prime number
- 28 Z16 divided by Y35
- 29 Eleven times a prime number
- 31 Y37 minus Z29
- 32 A square
- 34 Ten times a prime number
- 35 A square
- 37 X21 reversed
- 38 A cube

Z Direction

- 1 Same as X27
- 2 Mean of Z7 and X19
- 3 Half of Z15, then subtract X27
- 4 Y34 plus half of Y22
- 5 Mean of X25 and Z18
- 6 X20 minus Z1
- 7 Ninety-three times a prime number
- 8 Twice a prime number
- 9 First two digits are the same as first two digits of Y21
- 10 Two thousand four hundred ninety-six less than Z9
- 11 Thirty-four times a prime number
- 15 X12 minus Z1
- 16 Y32 times X28
- 17 Z1 minus Z18
- 18 X27 minus Z17
- 29 Twice Z17
- 31 Z17 plus X34

Solution:

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