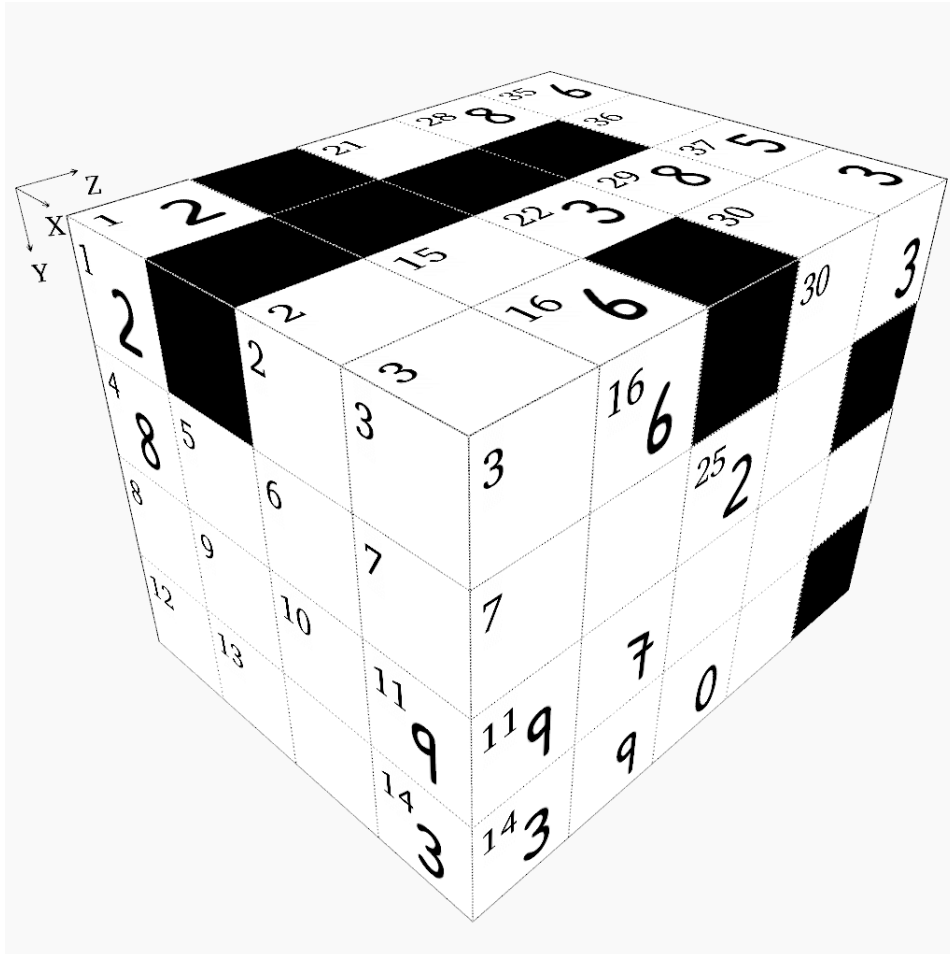


Difficulty: ☆☆☆☆☆

Box - Beginner Puzzle #6



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		2	3			15	16 6	21		22 3	
4 8	5	6	7	17 4	18 3			23	24	8	25 2
8	9	10	11 9		19 7		7		26	3	
12	13		14 3	20 7	3		9			27	0

28 8		29 8	30	35 6	36	37 5	3
31 5	32			38	6		
33	0			39			
	34				40		

X Direction

- 2 Twice the result of X39 minus Y15
- 4 X23 plus Y37
- 8 Y18 plus Z21
- 12 Mean of X4 and X40
- 15 X27 plus Y24
- 17 Z7 minus Y25
- 19 Y5 plus Z30
- 20 X15 minus Z30
- 23 Seventy-four times a prime number
- 26 Its digits total Y24
- 27 Five times a square
- 29 Twice a prime number
- 31 X35 minus X19
- 33 X34 plus half of Z34
- 34 X33 minus Z12
- 35 A prime number
- 38 Mean of X8 and Y18
- 39 A cube
- 40 Mean of X20 and Z33

Y Direction

- 1 Sixty-seven times X40
- 2 A prime number
- 3 X27 plus X12
- 5 Seventeen times X40
- 15 X39 minus Z12
- 16 A prime number
- 18 X33 minus Y35
- 21 X15 minus Z30
- 22 Mean of X34 and Y16
- 24 A square
- 25 Thirty times a square
- 28 X40 plus Y32
- 29 Twenty-nine times a prime number
- 30 A prime number
- 32 Z13 plus X38
- 35 Y5 minus Z13
- 36 Twelve times a prime number
- 37 Twice a prime number

Z Direction

- 2 One thousand six hundred forty-five more than Z11
- 3 Twice Z30
- 4 Thirteen thousand three hundred eighty-three less than Z11
- 5 X23 times Z30
- 6 Eleven thousand nine hundred twenty-four less than Z11
- 7 Eighteen times a prime number
- 9 Eleven times a square
- 10 Last two digits are the same as last two digits of Z11
- 12 Half of X2
- 13 X23 divided by seventy-four
- 14 A prime number
- 21 Twice the result of X8 minus X38
- 27 Twice the result of Y18 plus X20
- 30 Y32 minus Z21
- 33 Y35 divided by sixty-one
- 34 Twice Z12

Solution:

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

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