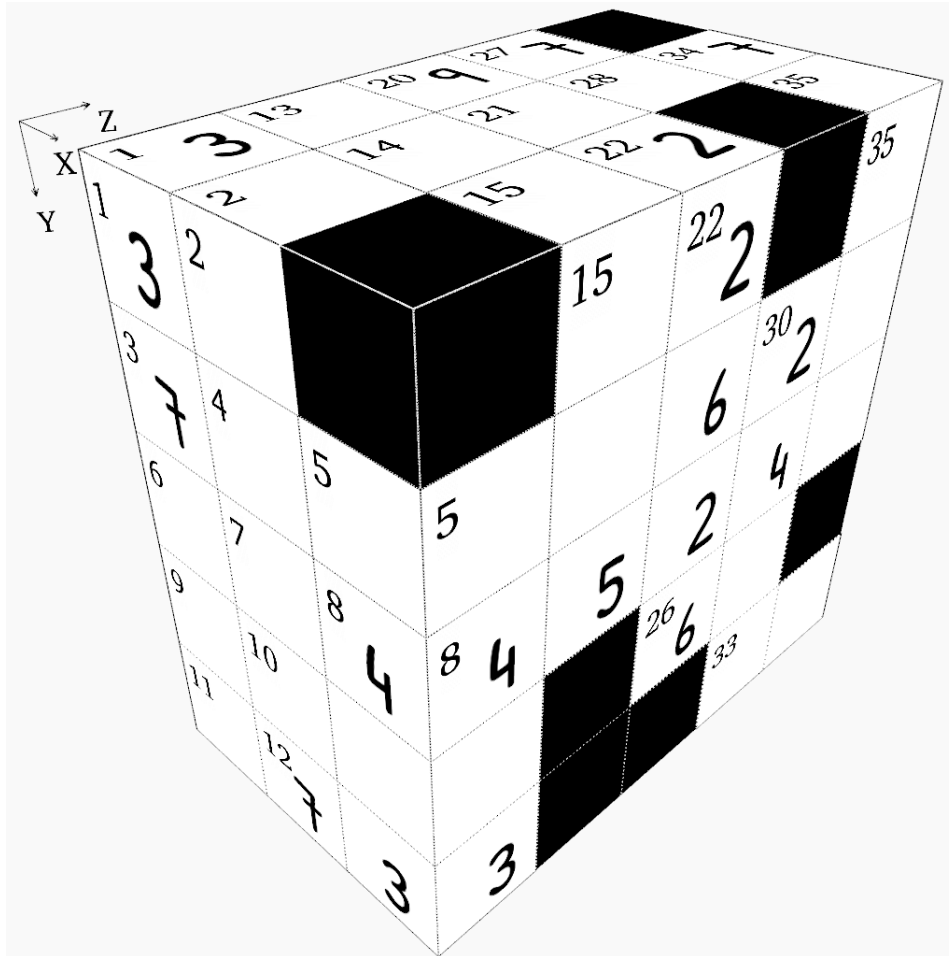


Difficulty: ☆☆☆☆☆

Box - Beginner Puzzle #43



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 3	2		13	14	15	20 9	21	22 2	27 7	28			34 7	35
3 7	4	5	16			23 7	0	6	29		30 2			
6	7	8 4		17 3	5	24 1		2		31 4		37 9		
9	10		18				25	26 6		32		38	39	
11	12 7	3	19			1			7		33	40 2		

X Direction

- 1 Y13 plus Z15
- 3 X9 reversed
- 6 X40 minus Y15
- 9 Nine times Y39
- 11 Z15 plus X13
- 13 Nine times a prime number
- 16 Mean of X13 and Y13
- 17 Five times a prime number
- 18 Four times a prime number
- 19 Same as Z12
- 20 Y37 minus X18
- 23 Twice a prime number
- 24 X32 plus half of X25
- 25 Mean of X31 and X19
- 27 Mean of Z33 and Y39
- 29 Sixteen times Z9
- 31 X36 plus Y39
- 32 A square
- 34 Y35 minus half of Z12
- 36 Y39 minus Z9
- 38 Z15 plus Z26
- 40 A prime number

Y Direction

- 1 Six hundred thirty-five more than Z2
- 2 Z1 times X36
- 5 Thirteen times a prime number
- 13 X9 divided by Y18
- 14 Twelve thousand six hundred eighty-seven more than Z5
- 15 Y39 plus Z9
- 18 Y1 divided by Y28
- 20 A prime number
- 21 Three times a prime number
- 22 Twenty-six times a prime number
- 27 Y15 minus half of X31
- 28 Thirty-two times a prime number
- 30 A prime number
- 34 Mean of Y18 and Y15
- 35 Mean of X16 and Z33
- 37 Thirty-six times Y18
- 39 X16 minus X19

Z Direction

- 1 Twenty-one times a prime number
- 2 Thirteen times a square
- 3 Ninety-seven times X31
- 4 Eleven times a prime number
- 5 Three times a prime number
- 7 Three times a prime number
- 8 Six thousand three hundred eighty-one less than Z5
- 9 Z33 minus Y18
- 10 Forty-six times a prime number
- 11 A palindrome
- 12 X16 minus Y39
- 15 Y37 divided by eighty-one
- 26 A square
- 33 A prime number

Solution:

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