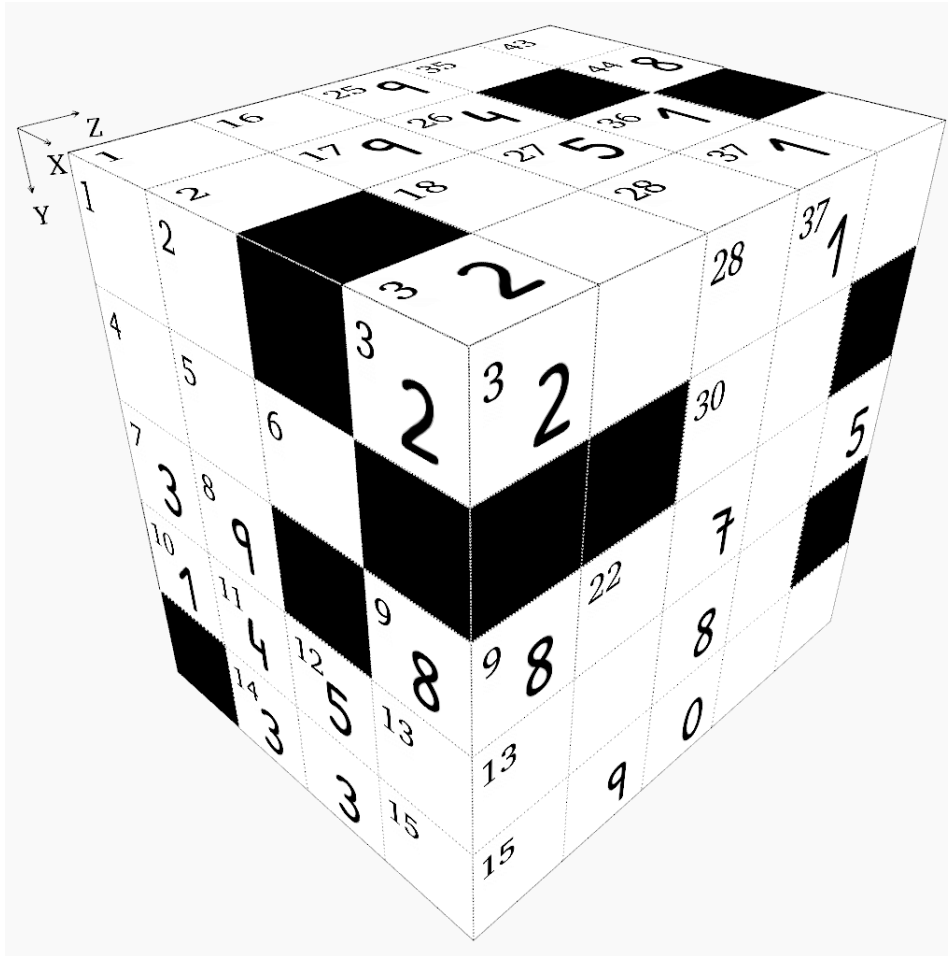


Difficulty: ☆☆☆☆☆

Box - Beginner Puzzle #33



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	2	16	17	9	18		25	9	26	4	27	5	28
4	5	6			19	1	6	7		29	6					30
7	3	9		8	20	8		21	4	22	31	5	7			7
10	1	4	5				23	5			32		1	4		8
		14	3	3	15	24	1	4		9	33		1	1		0

35		36	1	37	1	43	8				
38							8				
0		39				45	1	3	46	8	5
40	41	6	0			47	9				
42	4		2			48	7	4			

X Direction

- 1 X43 minus X36
- 4 Z6 minus half of X25
- 7 Mean of Y41 and X24
- 10 A prime number
- 14 A prime number
- 16 Fifty times a prime number
- 19 A prime number
- 20 Four times a prime number
- 23 Half of X16, then subtract Z21
- 24 X32 divided by eighty-two
- 25 Twice a prime number
- 29 Rearranged digits of X40
- 31 A prime number
- 32 Twenty-eight times a prime number
- 33 Ten times a prime number
- 36 Same as X39
- 38 Z15 minus Y2
- 39 X43 minus X1
- 40 Three times a prime number
- 42 One thousand two hundred seventy-six less than Z6
- 43 All digits are the same
- 45 Five times a prime number
- 47 Six times Z32
- 48 Six hundred twenty-five more than Z21

Y Direction

- 1 Seventy-seven times a prime number
- 2 One thousand fifty-five less than Z1
- 9 Twenty-three times X7
- 12 Y41 minus X39
- 16 Twice a prime number
- 17 Twice a prime number
- 18 Fifteen times a prime number
- 22 A prime number
- 25 Eleven thousand seven hundred ninety-seven more than Z9
- 26 A prime number
- 27 Five thousand two hundred sixty-five less than Z12
- 28 Twenty times a prime number
- 35 Eight times a prime number
- 36 Twenty-two times a prime number
- 37 Twice a prime number
- 41 A square
- 44 A prime number
- 46 X40 minus Y18

Z Direction

- 1 Seventeen thousand thirty-six less than Y17
- 2 Rearranged digits of Y22
- 3 Forty-three times a square
- 4 A prime number
- 5 Twice a prime number
- 6 Forty-six times Z34
- 7 A prime number
- 8 Z24 minus X14
- 9 Z1 plus X31
- 11 Forty-nine times a prime number
- 12 Twenty-six times a prime number
- 13 Y37 minus half of Y16
- 14 A prime number
- 15 Sixteen thousand nine hundred fifty-one less than Y17
- 18 Y27 divided by ninety-one
- 21 Rearranged digits of X32
- 24 X47 plus X32
- 30 Z34 minus Y41
- 32 A square
- 34 Four times a prime number

Solution:

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

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