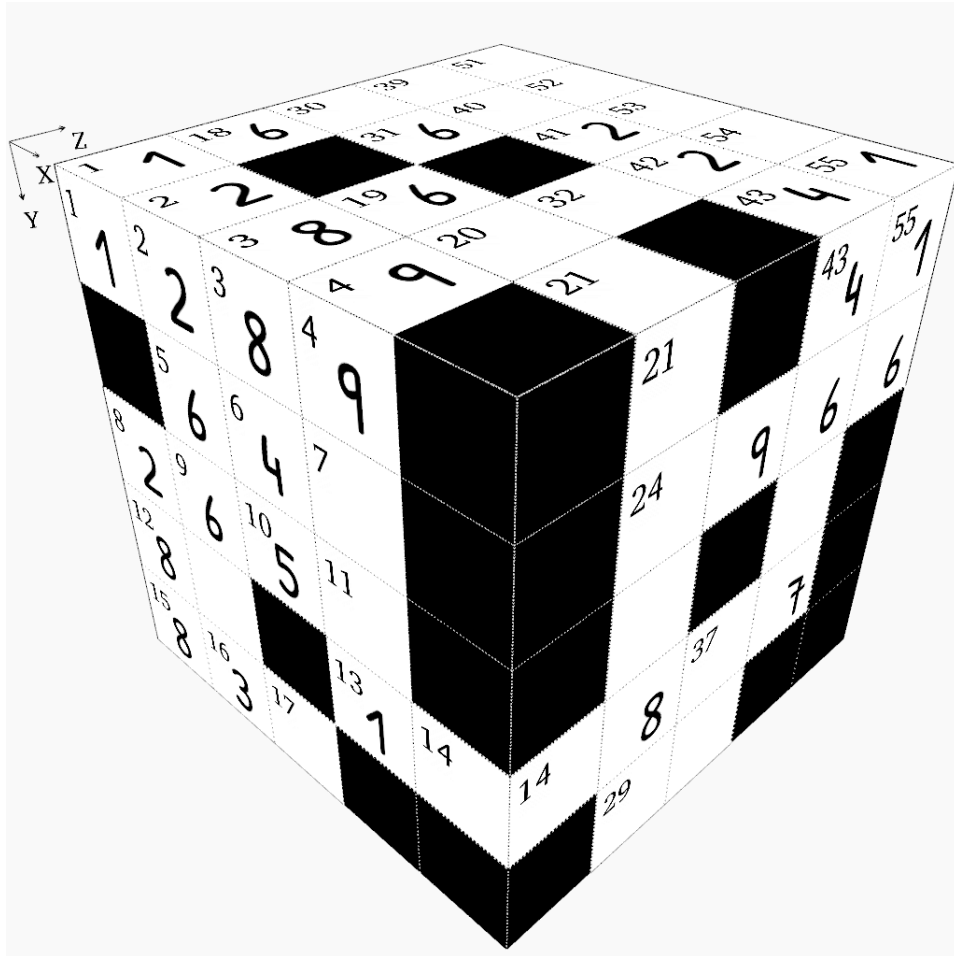


Difficulty: ☆☆☆☆☆

Cube - Beginner Puzzle #40



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 cube pictured above and divide it into individual X-Y layers, we will get these planes:

1 1	2 2	3 8	4 9		18 6		19 6	20	21	30	31 6		32	
	5 6	6 4	7		22 3	23 7	3		24		33 1			9
8 2	9 6	10 5	11		25		9				34			
12 8			13 1	14	26 5				8	35			36	37
15 8	16 3	17			27 8		6	28	29	38			7	7

39	40	41 2	42 2	43 4	51	52	53	54	55 1
44	45 9	9	7	6	56 1	5	0	8	6
46		47	48		57 7	4	7		
		49		7					
50 4					58 6	0	3	1	

X Direction

- 1 A prime number
- 5 Twenty-three times Z8
- 8 Eleven times a prime number
- 12 A square
- 13 Y37 minus Y36
- 15 Eleven times X30
- 19 Mean of X5 and Z9
- 22 Sixty-nine times a prime number
- 25 Fifty-four times a prime number
- 26 Z46 plus X12
- 27 Fifteen thousand nine hundred thirty-one more than Z17
- 30 Y40 plus Z46
- 33 A square
- 34 X38 divided by X19
- 35 Nine thousand five hundred thirty-five more than Z16
- 38 One thousand two hundred thirty-four more than Y41
- 39 A palindrome
- 44 Three thousand eight hundred eighty-two less than Y18
- 47 A prime number
- 49 Seven times a prime number
- 50 Z16 minus Y42
- 51 Mean of Z13 and Z24
- 56 Thirty-eight times a prime number
- 57 A prime number
- 58 Mean of X8 and Y4

Y Direction

- 2 Nine times a prime number
- 3 Mean of Z12 and X15
- 4 Three times a prime number
- 8 Eighteen times Y55
- 18 Eighteen thousand seven hundred seventy-six less than X27
- 19 Eight times a prime number
- 20 A prime number
- 21 Four times a prime number
- 23 Mean of Z43 and Y51
- 30 X49 minus half of X15
- 32 Same as Z3
- 33 X25 divided by Y37
- 34 Half of Z12, then subtract Z11
- 35 Z48 minus Y37
- 36 Mean of X34 and Z8
- 37 Mean of Y30 and Y40
- 39 X49 minus Y35
- 40 Mean of Z41 and Y36
- 41 Seven thousand seven hundred eighty-nine less than X22
- 42 Fifty-five times a prime number
- 43 Seventy-seven times a prime number
- 51 X30 plus Z43
- 52 Mean of X38 and X34
- 53 Mean of X26 and Y32
- 54 Three times a prime number
- 55 A square

Z Direction

- 1 A prime number
- 3 Y53 minus Z41
- 4 Twelve times a prime number
- 5 Z45 minus Z8
- 6 Seventy times a prime number
- 7 X39 plus Y39
- 8 Y53 minus Y23
- 9 X47 plus Z45
- 10 Nine times a prime number
- 11 Y37 minus Y36
- 12 Fourteen times a prime number
- 13 Twelve times a prime number
- 14 Eighty-one times a prime number
- 15 Five thousand seven hundred twelve more than X27
- 16 Five times a square
- 17 Ninety-one times a prime number
- 22 X50 minus Y37
- 24 Sixty-six times a prime number
- 26 Y53 plus Z46
- 28 Thirty-one times a square
- 29 Twice the result of Z31 minus X47
- 31 Twenty-seven times a prime number
- 41 X26 minus Y53
- 43 X33 minus X26
- 45 Mean of Z41 and X33
- 46 A prime number
- 48 Z14 divided by X12

Solution:

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

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