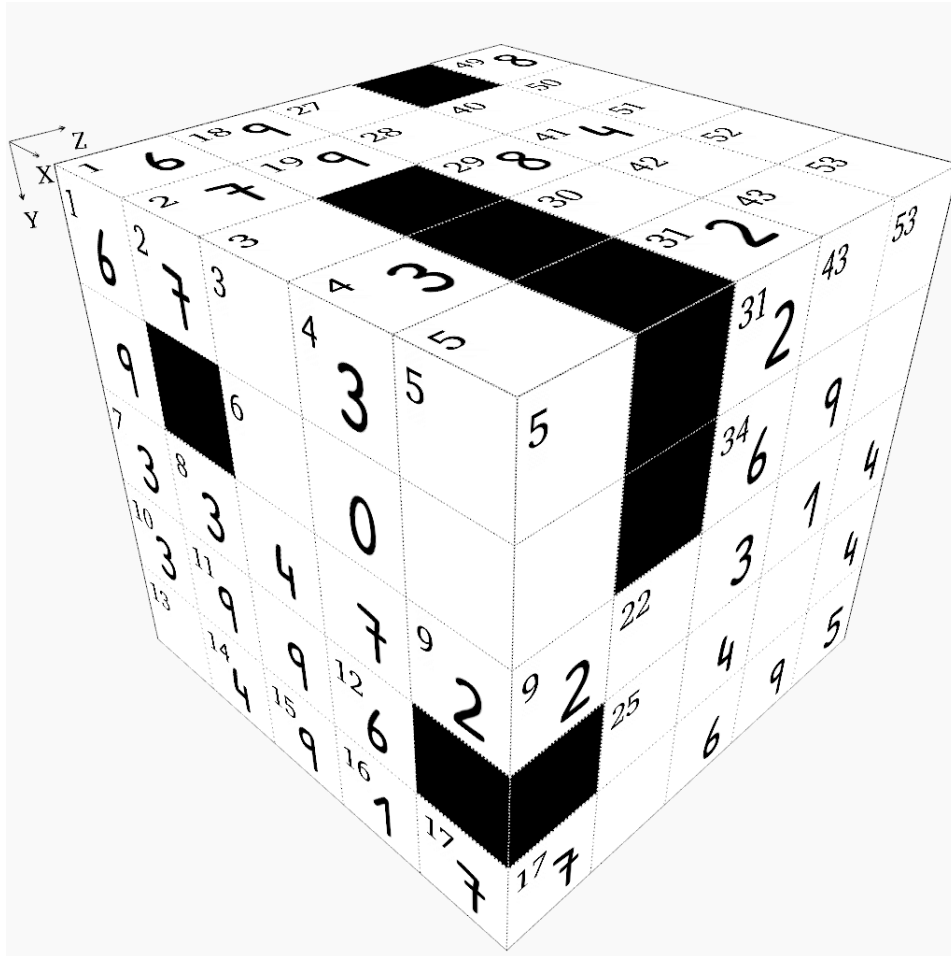


Difficulty: ☆☆☆☆☆

Cube - Beginner Puzzle #8



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 6	2 7	3	4 3	5	18 9	19 9				27	28	29 8	30	31 2
9		6	0			20 3	2			32 6	1	9	33	34 6
7 3	8 3	4	7	9 2	21	9			22	35				3
10 3	11 9	9	12 6		23 8	0		24	25	36			37	4
13	14 4	15 9	16 1	17 7		26		5		38 1			39 3	6

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

X Direction

- 1 Twenty thousand nine hundred eighty-five less than X49
- 6 A square
- 7 Sixty-four times a prime number
- 10 Eight hundred thirty-eight more than Z20
- 13 Eleven thousand two hundred fourteen less than Y27
- 18 Y37 plus Z48
- 20 Y21 minus X39
- 21 Mean of Y41 and X46
- 23 X57 minus Z48
- 24 Mean of X21 and Y37
- 26 Y50 minus Z2
- 27 Fifty-eight times a prime number
- 32 First two digits are the same as first two digits of Z33
- 35 X24 plus X21
- 36 Forty-two times a prime number
- 38 Z48 minus X39
- 39 A square
- 40 Z10 minus X13
- 44 Nine thousand five hundred eighty-eight more than Y27
- 45 X6 minus X21
- 46 Mean of X6 and Y49
- 47 X1 divided by X10
- 49 Five hundred twenty-five more than Y50
- 54 Thirteen times a square
- 55 Rearranged digits of X40
- 56 X36 plus Z14
- 57 Y24 plus X24

Y Direction

- 1 Five thousand three hundred sixty-two less than Z17
- 3 A prime number
- 4 Nineteen times a prime number
- 5 X45 plus Z38
- 8 Mean of Z15 and Z1
- 19 Sixty-eight times a prime number
- 21 X6 minus X20
- 22 Y8 minus X23
- 24 Mean of X45 and X18
- 27 Three times a prime number
- 28 Eleven thousand four hundred fifty-two more than Z2
- 29 Twenty-nine times a prime number
- 30 X39 minus X38
- 31 Six times a prime number
- 37 X47 plus Z45
- 40 X57 minus X46
- 41 Mean of Y30 and Y21
- 42 Three times a prime number
- 43 Nineteen thousand seven hundred thirty-eight less than X49
- 44 X44 minus X27
- 49 X18 minus X47
- 50 Nine thousand three hundred ninety-four less than Y51
- 51 Twenty-six times a prime number
- 52 A prime number
- 53 Nine thousand five hundred thirteen more than X1
- 56 X18 minus Y21

Z Direction

- 1 First two digits are the same as first two digits of Y43
- 2 Eighteen times a prime number
- 6 Nineteen times a prime number
- 7 Fifty-four times a prime number
- 8 X57 plus Z31
- 9 Three thousand thirty-two less than Y31
- 10 A prime number
- 11 Twenty-one thousand seven hundred forty more than Y43
- 12 Three times a prime number
- 14 Six times X23
- 15 Y21 plus Y30
- 16 Mean of Z30 and Y40
- 17 Five times a prime number
- 20 Twice a prime number
- 25 Twenty-two times a prime number
- 29 Y52 minus Y22
- 30 X21 plus Y5
- 31 Y5 plus half of X35
- 32 Four times a prime number
- 33 X54 divided by Y41
- 34 Forty-one times X47
- 38 Z30 minus X6
- 45 A square
- 48 Y49 minus Z45

Solution:

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

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