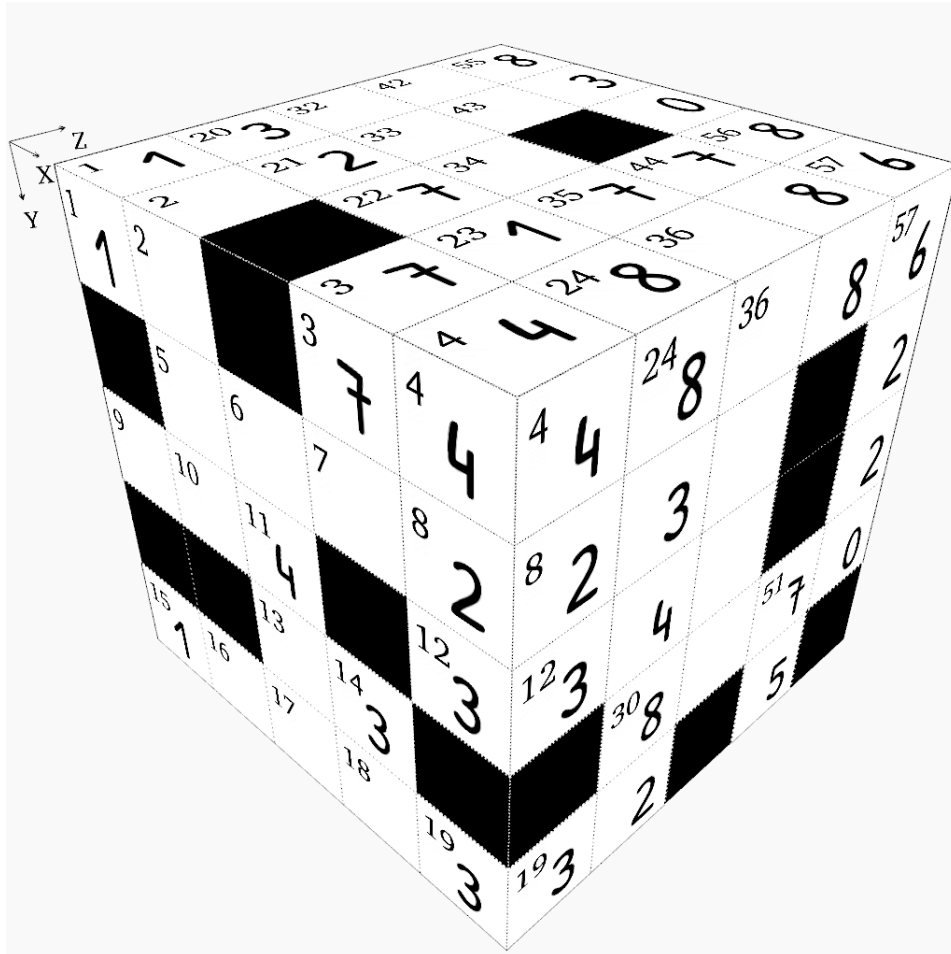


Difficulty: ☆☆☆☆☆

Cube - Beginner Puzzle #21



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		3 7	4 4	20 3	21 2	22 7	23 1	24 8	32	33	34	35 7	36
	5	6	7	8 2	25		3	1	3		37	2	5	
9	10	11 4		12 3	26 3	27 3		27 4	4			38 6		
		13	14 3		28 8		29 2	5	30 8	39	40 1			
15 1	16	17	18	19 3	31		5	9	2	1		41 8	9	

42	43		44 7	8	55 8	3	0	56 8	57 6
	45	46 5			7			58 8	2
47 1	48 8				59	60 6	61 7	3	2
49 6	2		50 8	51 7	62	4			0
52	53		54	5		63 4			

X Direction

- 1 X13 minus X58
- 3 Y50 minus X1
- 5 Four times a prime number
- 9 Y46 minus Z16
- 13 Z10 plus Z27
- 15 A prime number
- 20 Eight thousand seventy-eight more than X62
- 25 A prime number
- 26 Eleven thousand eighty-four less than Y43
- 29 Three times Z48
- 31 Nine thousand one hundred forty less than X59
- 32 Thirty-four times a prime number
- 37 Seven times Y35
- 38 Z14 plus Y46
- 39 Z40 minus X1
- 41 Z40 minus Z14
- 42 Mean of X1 and Z47
- 44 Mean of X3 and X58
- 45 Eighteen times Y33
- 47 X42 plus half of Z12
- 49 Fifty-seven times a prime number
- 52 X1 plus Y3
- 54 Mean of Z14 and Y51
- 55 Z5 plus X59
- 58 Mean of Z40 and Z27
- 59 Four times a prime number
- 62 Six thousand seven hundred forty-six less than Y20
- 63 Y61 minus Z17

Y Direction

- 2 X29 minus X13
- 3 Half of X62, then subtract Z2
- 4 Mean of Z48 and Y61
- 6 A prime number
- 14 X3 minus Z14
- 20 Six times a prime number
- 21 Z12 minus X39
- 22 Seventy-five times a prime number
- 23 Seven times a prime number
- 24 Rearranged digits of Y56
- 33 A square
- 34 First two digits are the same as first two digits of Z40
- 35 Thirty times Y33
- 36 Thirteen times a prime number
- 39 X47 divided by Z47
- 43 Twenty-eight times a prime number
- 44 Mean of X54 and Y50
- 46 A prime number
- 47 X39 plus X54
- 50 Mean of Y3 and X13
- 51 Y47 minus X13
- 55 Thirty-four times X29
- 56 Mean of Z18 and X59
- 57 Twenty times a prime number
- 60 Forty-six times X42
- 61 Nineteen times Z27

Z Direction

- 1 Twice a prime number
- 2 Seven hundred eighty-four more than Y23
- 3 Forty-two times a prime number
- 4 Six times a prime number
- 5 X25 minus half of Z1
- 6 Y33 times Z9
- 7 First two digits are the same as Z22
- 8 Z30 divided by Y14
- 9 X44 minus Y33
- 10 Y50 minus Z19
- 11 Last two digits are the same as Y3
- 12 X29 plus X52
- 13 Eighteen thousand five hundred ninety-one more than Y22
- 14 X39 minus X44
- 15 Twice the result of Z4 minus Z11
- 16 Y50 divided by five
- 17 Last two digits are the same as last two digits of X29
- 18 Sixteen times a prime number
- 19 Mean of X1 and Z10
- 22 X52 minus Z16
- 27 Twice the result of X39 minus X13
- 28 Two-thirds of Z2
- 30 First two digits are the same as X41
- 40 Y14 plus Y50
- 47 Y46 minus X9
- 48 X1 plus Y51
- 50 Y47 minus Z53
- 53 Mean of Z48 and X58

Solution:

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

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