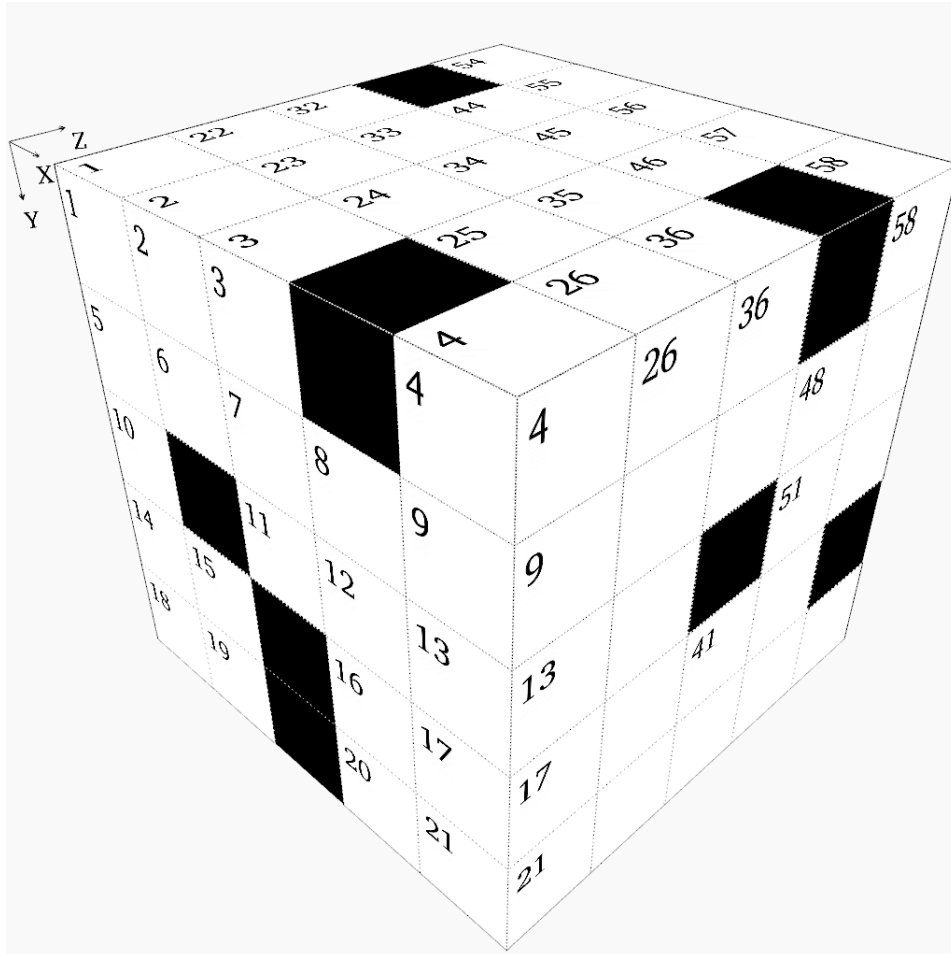


Difficulty: ★★★★★

Cube - Challenging Puzzle #11



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	2	3		4	22	23	24	25	26	32	33	34	35	36
5	6	7	8	9	27					37				
10		11	12	13	28							38		
14	15		16	17	29		30			39		40		41
18	19		20	21	31					42			43	

	44	45	46		54	55	56	57	58
47				48		59			
49	50			51	60				
		52					61		
			53				62		

X Direction

- 1 Z25 divided by X61
- 5 Two thousand seven hundred ninety-nine more than X37
- 11 X14 times X38
- 14 X11 divided by Z50
- 16 Y58 divided by twelve
- 18 Y41 plus Z15
- 20 Y2 minus Y36
- 22 First two digits are the same as first two digits of Y48
- 27 Its digits total X20
- 28 Seven times a prime number
- 29 Nine thousand five hundred forty-six less than Y4
- 31 X44 minus Z43
- 32 Twenty-five times a prime number
- 37 Forty-two times a prime number
- 38 A square
- 40 Mean of Y58 and Z51
- 42 X5 plus X52
- 44 Z18 minus X16
- 47 A prime number
- 49 Seven times a prime number
- 52 Twenty-three times Y60
- 53 Three-fourths of X31
- 54 Twice the result of X49 minus X32
- 59 Forty-six times a prime number
- 60 Twice the result of X37 minus Y60
- 61 A square
- 62 A prime number

Y Direction

- 1 A prime number
- 2 X31 minus Z50
- 3 Z14 plus X14
- 4 Four thousand four hundred twelve less than X22
- 8 Consecutive digits unordered
- 15 X18 minus Y41
- 22 Eleven times a prime number
- 23 Twenty-eight times a prime number
- 24 A prime number
- 25 X16 times X1
- 26 Z12 plus Y55
- 32 Y41 minus Y60
- 33 X16 reversed
- 34 Six thousand five hundred fifty-seven more than X60
- 35 One thousand four hundred fifty-one less than Z21
- 36 Y15 plus Y39
- 39 Y47 minus X14
- 41 X38 plus X14
- 44 A square
- 45 X53 plus Z17
- 46 A palindrome
- 47 X31 minus Z13
- 48 A palindrome
- 55 Z25 divided by Y36
- 56 Ten thousand three hundred thirty-one less than X22
- 57 Y56 minus X47
- 58 Twenty times Y32
- 60 Y2 minus Z13

Z Direction

- 1 Mean of X62 and X16
- 2 A prime number
- 3 Mean of Y4 and Z19
- 4 Y44 minus X38
- 5 Twice a prime number
- 6 Three times a prime number
- 7 Nine times a prime number
- 8 Y48 plus Z14
- 9 Z10 plus half of Y23
- 10 Half of Z49
- 11 Ten thousand six hundred thirty-three more than Z9
- 12 Z11 minus half of X44
- 13 Y55 minus X53
- 14 Three times a prime number
- 15 Y32 plus X20
- 16 Twice a prime number
- 17 A prime number
- 18 Z4 plus half of X31
- 19 Six times X11
- 21 A prime number
- 25 Y25 plus X1
- 30 Fifty-nine times a prime number
- 43 Mean of X59 and Z10
- 49 Mean of Y36 and Y41
- 50 A square
- 51 X31 minus X20

Solution:

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

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