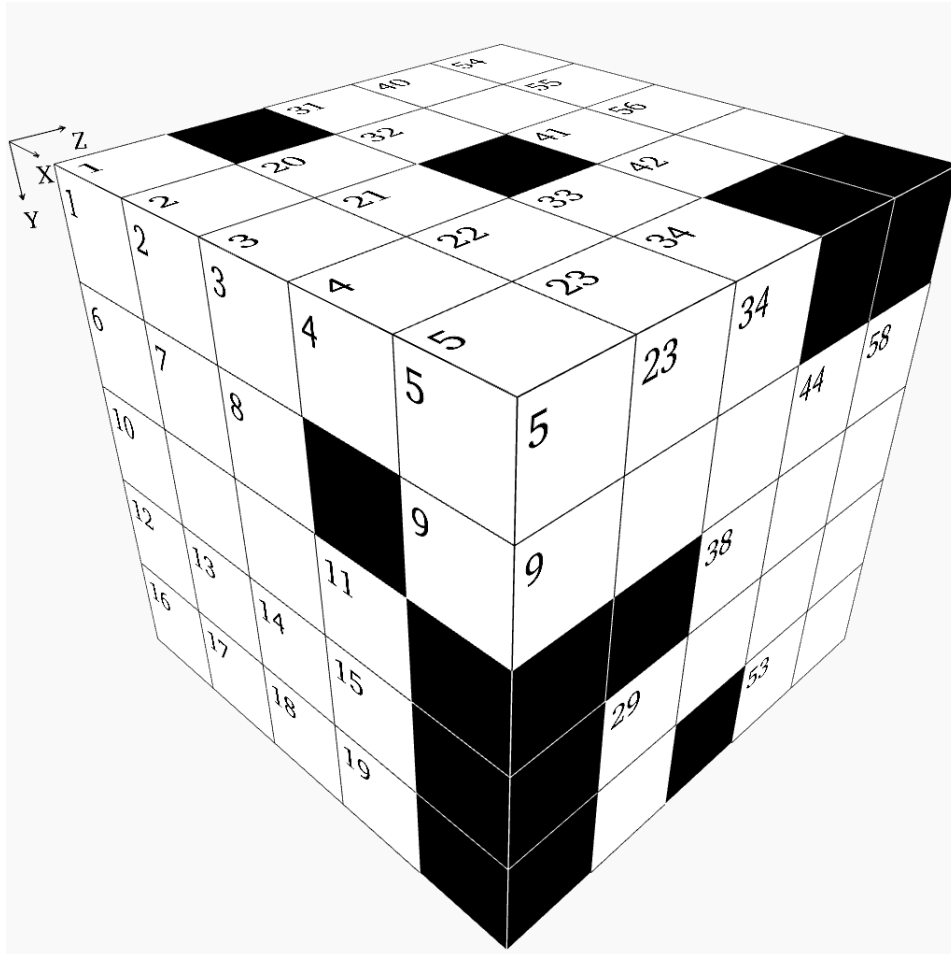


Difficulty: ★★★★★

## Cube - Hard Puzzle #35



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

40		41	42		54	55	56		
			43	44	57				58
45	46	47						59	
48			49		60	61	62		
50	51	52		53	63				

### X Direction

- 1 Nine hundred ninety-two more than Y42
- 6 X57 minus Z31
- 10 X54 minus X40
- 12 Fifty-six times a prime number
- 16 Y44 minus X6
- 20 Y31 minus Y34
- 24 Fifteen times a prime number
- 26 Eleven thousand three hundred forty more than Z11
- 30 Z9 plus half of X59
- 31 Z7 divided by Z52
- 33 Mean of Z53 and Z15
- 35 Z9 minus Y61
- 37 Y36 minus X59
- 39 Three-fifths of Z25
- 40 Thirty-one times a prime number
- 43 X60 minus half of Z12
- 45 Y2 plus half of X12
- 48 Three thousand nine hundred eighty-three less than Y2
- 50 Three thousand two hundred ninety-eight more than Y22
- 54 Twice a prime number
- 57 Forty-two times Y5
- 59 Same as Z18
- 60 Seven thousand eight hundred sixty-six more than Z11
- 63 X6 minus Y5

### Y Direction

- 1 Mean of Z11 and Y56
- 2 A prime number
- 3 X24 plus Z8
- 5 Y59 minus Z15
- 11 Six times a prime number
- 20 Z15 plus Y61
- 21 X50 divided by Z5
- 22 X48 minus Z13
- 23 X43 plus X31
- 24 Three times a prime number
- 27 Z3 minus X31
- 28 Y62 plus Z41
- 29 Z49 plus half of Z15
- 31 Two thousand four hundred less than Y42
- 32 Z15 minus Z37
- 33 Twice the result of X37 plus X33
- 34 Mean of X20 and X43
- 36 Y46 minus Z37
- 40 Fourteen times a prime number
- 42 Fifty times a prime number
- 44 Last two digits are the same as Y28
- 46 Twenty-two times a square
- 47 X39 minus Z15
- 54 Y62 plus X33
- 55 Mean of Y59 and Y54
- 56 Z41 plus Y60
- 58 Eight times a prime number
- 59 Y62 plus Z53
- 60 A prime number
- 61 A cube
- 62 Y29 minus Z53

### Z Direction

- 2 Six times a prime number
- 3 Y55 reversed
- 4 A palindrome
- 5 X50 divided by Y55
- 6 Z10 times Y61
- 7 Z17 times Y23
- 8 X6 plus Y23
- 9 Z51 plus X35
- 10 Z6 divided by Z51
- 11 X30 minus Z25
- 12 Twenty-nine times a square
- 13 Ten thousand five hundred fifty-eight more than X35
- 14 A prime number
- 15 Y62 plus Z37
- 16 A prime number
- 17 Y29 minus Z3
- 18 Y36 minus X37
- 19 Mean of Z53 and Y28
- 25 Five times a prime number
- 29 Eighty-four times a prime number
- 31 Z5 minus Y56
- 37 A square
- 38 Mean of X31 and X63
- 41 A square
- 49 Y32 reversed
- 51 A cube
- 52 Mean of X59 and Z19
- 53 Half of Y56

**Solution:**

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

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