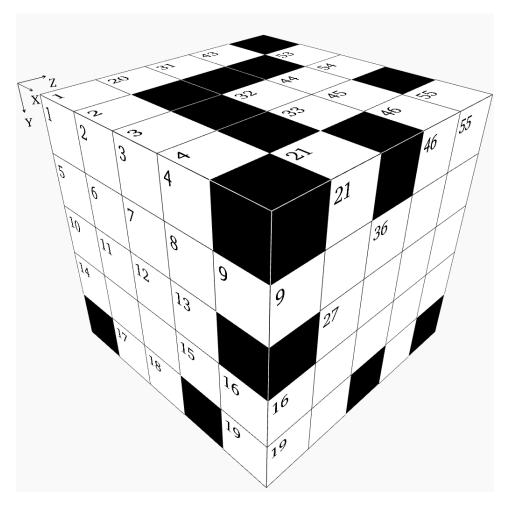


Cube - Hard Puzzle #4



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:

6	7	8	9		22	23	24	25		34		35			36
11	12	13										33			
					26				27	37				38	
		15	16					28		39		40	41		
17	18		19		29			30					42		
		43		44	45	46			53	54		55			
		47	48		49			56			57				
		50							58						
		51									59				
		52								60					
	17			17 18 19 19 19 48 50 51 51	17 18 19 19 44 47 48 50 50 51	17 18 19 29 43 44 45 47 48 49 50 51	17 18 19 29 43 44 45 46 47 48 49 50 51	17 18 19 29 43 44 45 46 47 48 49 50 51 51	17 18 19 29 30 43 44 45 46 47 48 49 56 50 51	17 18 19 29 30 43 44 45 46 53 47 48 49 56 50 58 51 51	17 18 19 29 30 30 43 44 45 46 53 54 47 48 49 56 58 50 51 51 51 58	17 18 19 29 30 53 54 47 48 49 56 57 50 51 59	17 18 19 29 30 53 54 55 47 48 49 56 58 57 50 51 59 59	17 18 19 29 30 30 42 43 44 45 46 53 54 55 47 48 49 56 57 57 50 51 51 59 59	17 18 19 29 30 53 54 55 47 48 49 56 57 57 50 51 51 59 59

X Direction

- **1** Y55 minus Y16
- **5** Three times a prime number
- **10** Twice a prime number
- **14** Fourteen times a prime number
- **17** Z46 minus X60
- **22** A prime number
- **26** Twelve times a prime number
- 28 Six times Z33
- 29 Y36 times Z17
- **32** A square
- **34** Three times a prime number
- 37 Four thousand two hundred forty-two 31 Mean of X5 and Y4 more than Y21
- 39 One thousand four hundred fifty less than Z15
- 42 Y24 plus Y23
- 44 Five times Y16
- **47** Ten thousand nine hundred seventy-four more than Y2
- **50** Twice a prime number
- **51** A prime number
- **52** Sixty-seven times X59
- 53 Z41 minus X59
- **56** Z18 plus half of Y53
- **58** Twenty-eight times a prime number
- 59 Z30 divided by three
- **60** Y24 minus Z17

Y Direction

- **1** Twice a prime number
- **2** Eleven thousand three hundred twenty-three more than Z18
- **3** A prime number
- **4** Three times a prime number
- **16** Mean of X32 and Z33
- **20** Eight times a prime number
- **21** Mean of Z9 and X42
- 23 X53 minus Z46
- 24 Mean of Z19 and Y16
- 25 Half of Y20, then subtract Y3
- 32 Three times a prime number
- 35 Z40 minus Y24
- **36** Thirteen times a prime number
- **38** All digits are the same
- 43 Y46 minus Y57
- 44 Last two digits are the same as X53
- **45** Twice the result of Z19 minus Z49
- **46** Three times a prime number
- **48** X29 divided by Z33
- **53** Eight times a prime number
- **54** Twice the result of Y35 minus X32
- **55** Y45 plus Z1
- **57** Twice a prime number

Z Direction

- **1** Y1 minus Z30
- **5** Twenty-four times a prime number
- **6** Sixteen times a prime number
- Thirty-four times a prime number
- 8 Twice Z30
- **9** Five times a prime number
- 10 Three times a prime number
- **11** Twenty-two times a prime number
- **12** Eight thousand seven hundred sixteen less than Z5
- 13 Seven times a prime number
- **14** A prime number
- **15** A prime number
- 16 Half of Z7, then subtract Y23
- 17 A square
- **18** A prime number
- **19** X17 plus Y45
- **27** Y2 minus Z12
- **29** Z46 plus half of X10
- **30** Y16 minus X60
- **32** X50 plus X42
- **33** Y36 divided by Y16
- **40** Four times a prime number
- 41 Y38 minus X44
- 46 Mean of X32 and Z30
- 49 Mean of X17 and Z19

Solution:

7	5	1		4			5					1		2		8	1	
5	1	9		6	3		1	3	6		6	9		8	4	3		6
5	2	4		2			1	0	3		0			2	4	1	3	1
8	9	8		9	4		1				7	8		9	5	9	3	1
	4	3			7		2	9	9		3	9		6		9	3	
			5	;		2	3	5	;			8	7			7		
			6	,	2	2	6	. 8	3	4		4	2	•	1	5		
			7	•	3	4		4	I			8	8		7	6		
			1		0	8	8	3	3			8		•	1	1		
			7	·	3	7		1		8			1	1	1			