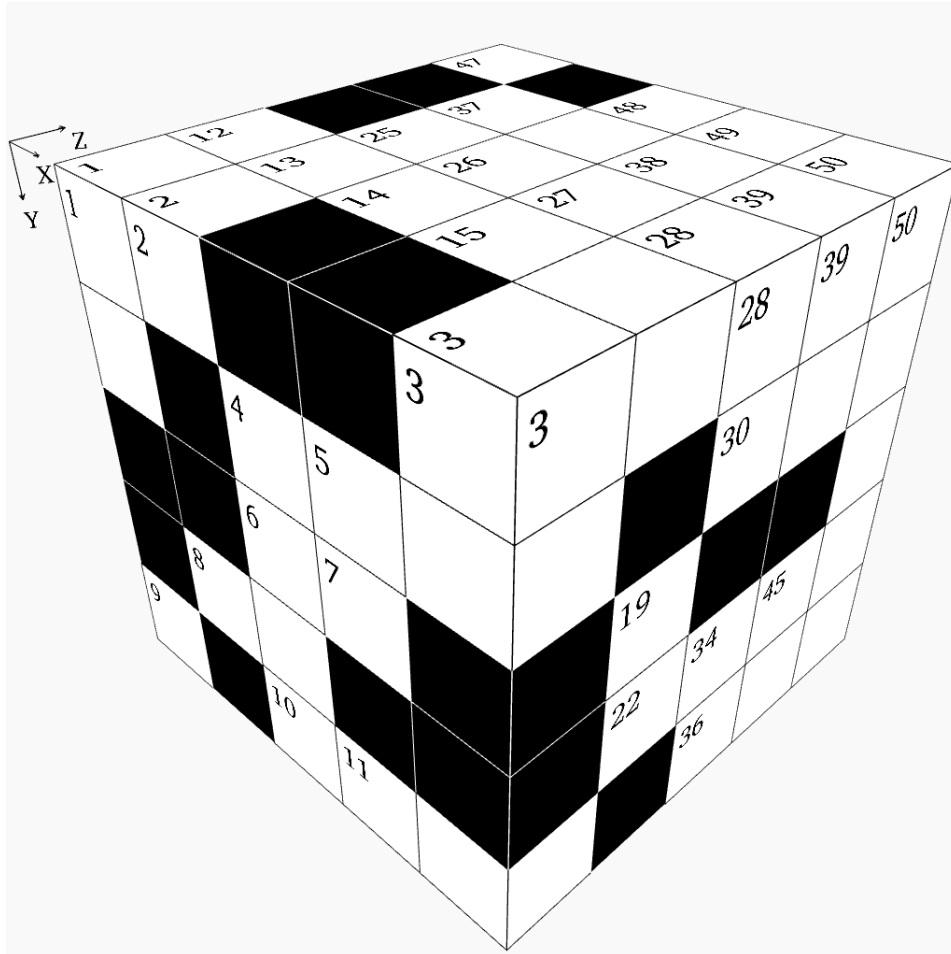


Cube - Hard Puzzle #6



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

	37		38	39	47		48	49	50
40			41		51	52			
42		43			53				
44				45	54				
46								55	

X Direction

- 1 Three times Y45
- 4 X42 minus half of Z33
- 6 Sum of digits in Y48
- 8 X40 divided by five
- 10 X44 divided by X1
- 12 One thousand six hundred twenty-four less than X35
- 16 Y31 plus Y5
- 17 Six thousand two hundred one less than Y47
- 20 Y31 minus X1
- 21 Mean of Y28 and X55
- 23 Twice the result of X31 plus Y5
- 25 Thirty-three times a prime number
- 29 X31 minus Y39
- 31 X21 plus X29
- 32 A prime number
- 35 Four times a prime number
- 37 A prime number
- 40 Y28 plus X6
- 41 X32 minus Y50
- 42 A prime number
- 44 Ninety-three times a prime number
- 46 Half of Y26, then subtract Z7
- 48 Twice a prime number
- 51 Y27 minus X25
- 53 Four times a prime number
- 54 A prime number
- 55 A cube

Y Direction

- 1 X44 divided by X10
- 3 Y34 minus Y28
- 4 Rearranged digits of X29
- 5 Z30 divided by twenty-two
- 13 First two digits are the same as first two digits of X16
- 14 A prime number
- 15 Twice the result of Y47 plus Y40
- 17 Rearranged digits of Z24
- 19 Y52 divided by X8
- 25 Three times a prime number
- 26 Eight times a prime number
- 27 Last two digits are the same as last two digits of Y31
- 28 Y1 minus Z40
- 31 X20 plus Y1
- 34 Four times a prime number
- 37 Mean of X17 and X55
- 38 Z17 times Y28
- 39 X20 divided by three
- 40 Twenty-nine times a prime number
- 43 X4 reversed
- 45 Mean of Y19 and X8
- 47 Sixty-four times a prime number
- 48 Fourteen times a prime number
- 49 Z3 minus half of X35
- 50 A prime number
- 52 Forty times X6

Z Direction

- 1 Three times Y5
- 2 A prime number
- 3 Eleven thousand nine hundred fifty-nine less than X54
- 4 A cube
- 5 Five thousand eight hundred thirty-five more than Y47
- 6 Twice a prime number
- 7 Five thousand nine hundred two more than Z5
- 8 Two thousand seven hundred fifty-four less than Z6
- 9 Three thousand nine hundred ninety-seven less than Z7
- 10 Fifty-three times a prime number
- 11 Four times a prime number
- 14 Mean of Z16 and Z21
- 15 Sixty-three times a prime number
- 16 Five times a prime number
- 17 All digits are the same
- 18 Y37 minus Z1
- 20 Three times a prime number
- 21 Thirteen times a prime number
- 22 Eighty-nine times Y5
- 24 Nineteen times a square
- 30 Y43 plus Z31
- 33 Eight times a prime number
- 36 Y14 minus X41
- 40 Mean of X6 and Z1

Solution:

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

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