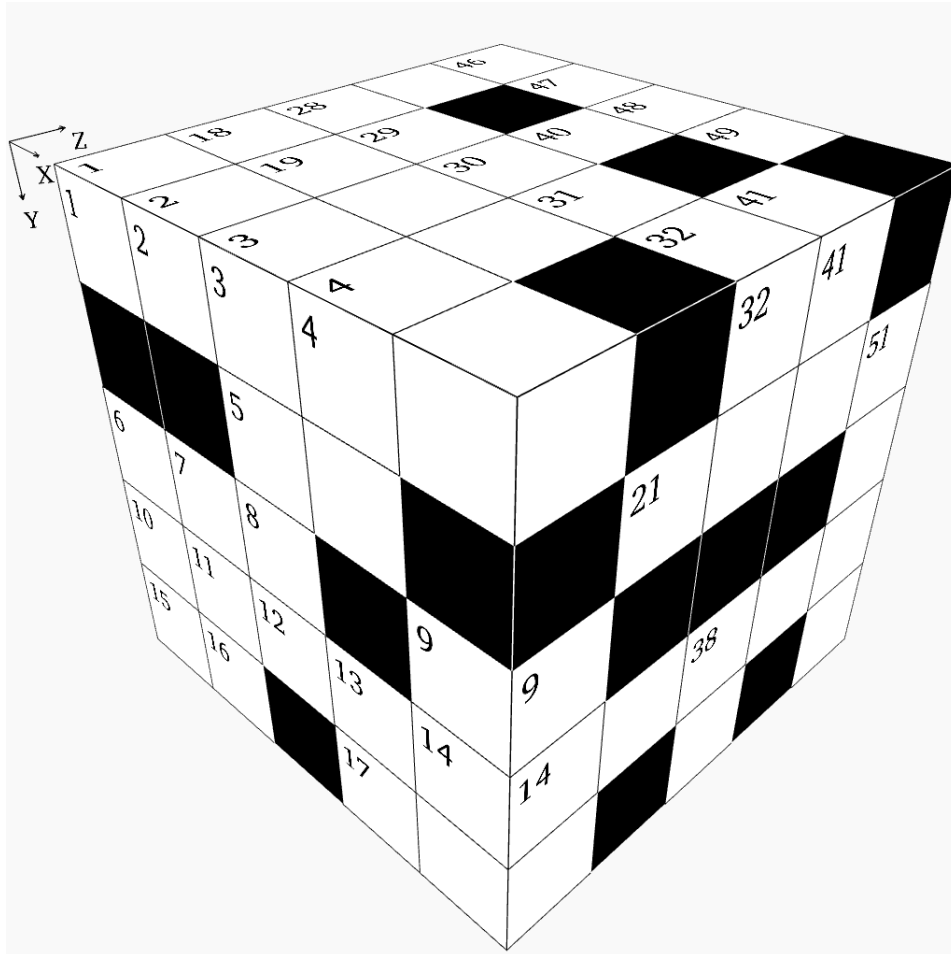


Cube - Hard Puzzle #32



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

				40		41	46	47	48	49	
							50				51
							52				
							53				
							54				

X Direction

- 1 A prime number
- 5 Mean of Y41 and X42
- 6 Seventeen times a prime number
- 10 Twice the result of X28 plus Y6
- 15 X5 minus Y44
- 17 Y41 minus X43
- 18 Twice a prime number
- 22 Z6 plus Y9
- 25 Z3 plus Y4
- 26 Twice a prime number
- 28 Rearranged digits of X53
- 33 Mean of X50 and Z10
- 35 Z4 minus X17
- 36 Nine hundred sixty-six less than Z12
- 39 X1 plus half of Y32
- 42 Mean of Y41 and Y38
- 43 X5 minus Y44
- 44 Ten times a prime number
- 45 Eight times Y38
- 46 A prime number
- 50 Six times a prime number
- 52 Seven thousand seven hundred thirteen less than Z16
- 53 Eight times a prime number
- 54 Last two digits are the same as X15

Y Direction

- 3 Seven times a prime number
- 4 Y41 minus Z32
- 6 Y29 divided by ninety-nine
- 7 Five times a prime number
- 9 Z7 minus Z12
- 13 Z39 minus X17
- 19 Y46 minus half of X44
- 22 Y37 minus Y44
- 23 A prime number
- 24 Z34 reversed
- 28 A prime number
- 29 X54 minus X46
- 30 One thousand six hundred thirty-one more than X53
- 31 Mean of Z32 and Y22
- 32 X35 minus Z17
- 37 Mean of X43 and Y4
- 38 Mean of Y13 and Z32
- 40 Twice a prime number
- 41 X17 plus X15
- 42 Nine times a prime number
- 44 Twice Y32
- 46 Four thousand eight hundred thirty-five less than Z11
- 47 Thirty-seven times a prime number
- 48 Twenty-five times a prime number
- 49 Two hundred forty-three more than Y47
- 51 Z21 reversed

Z Direction

- 1 One thousand nine hundred eighty-eight less than X39
- 2 Z17 plus X42
- 3 Seven thousand three hundred twenty-eight more than Y30
- 4 X36 divided by Z39
- 6 Y24 minus X5
- 7 Z8 minus X26
- 8 One thousand nine hundred three more than X36
- 10 Twenty-two times a prime number
- 11 Y49 minus half of Z12
- 12 Twice a prime number
- 13 Fourteen thousand one hundred five more than X33
- 14 A palindrome
- 16 Thirty-three times a prime number
- 17 Y7 minus Z34
- 20 Sixteen times a prime number
- 21 Thirty-eight times a prime number
- 27 Sixty-five times Y31
- 32 Z1 divided by X45
- 34 Y24 reversed
- 39 Four times a prime number

Solution:

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

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