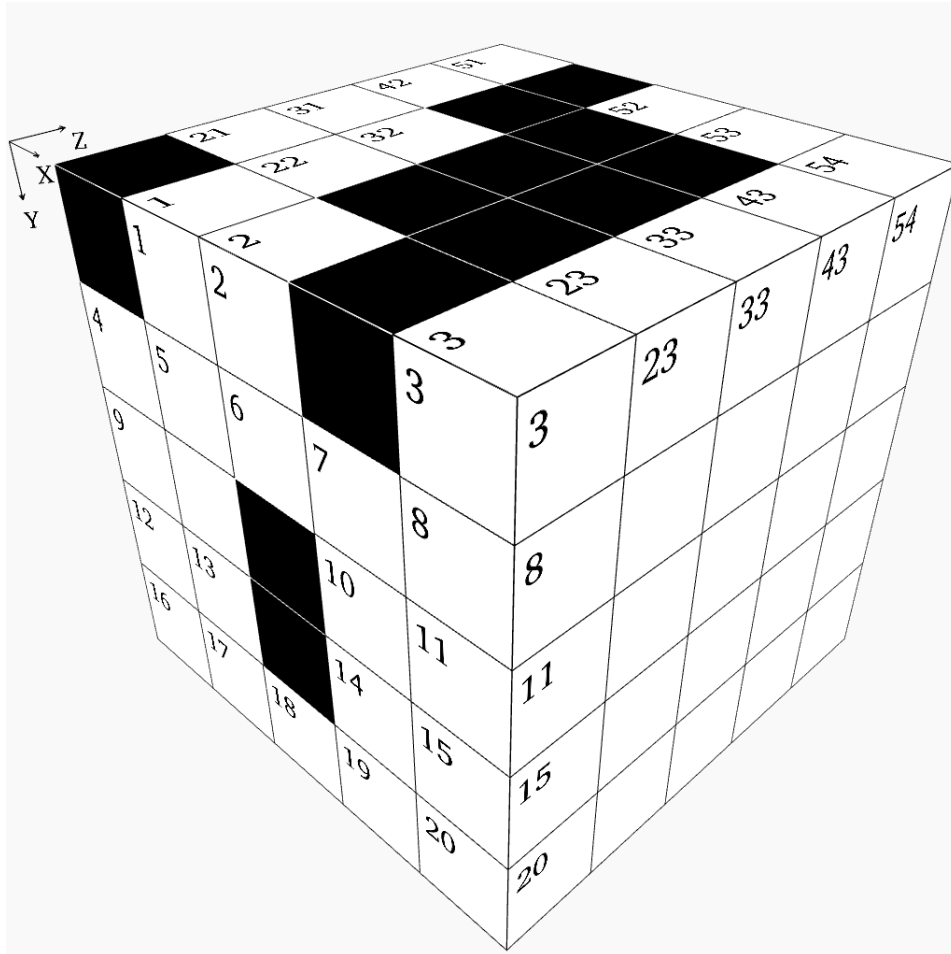


Cube - Challenging Puzzle #17



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:

- "Words" may not start with a zero.
- "Words" in the X direction read from left to right.
- "Words" in the Y direction read from top to bottom.
- "Words" in the Z direction read from front to back.
- There is one unique solution which satisfies all the clues given below.
- 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	21	22	23	31	32	33	
4	5	6	7	8	24	25	34	35	36
9	10	11	26	27	28	29	37	38	39
12	13	14	15	30	40	41			
16	17	18	19	20					
42	43	51	52	53	54				
44	45	46	47	55					
48				56	57	58			
49						59			
50									

X Direction

- 1 X59 minus Y53
- 4 Half of X16, then subtract Z10
- 9 X12 minus Y2
- 10 X1 minus X55
- 12 Y29 plus Y53
- 14 Mean of Z39 and Y58
- 16 Consecutive digits unordered
- 21 X12 minus Y28
- 24 Mean of Z3 and X52
- 26 X9 reversed
- 27 Seventeen thousand nine hundred seventy-one less than Z9
- 30 Two thousand four hundred eighty more than Z15
- 31 Mean of Z39 and Z16
- 34 Two thousand four hundred seventy-five more than Z18
- 37 Three thousand nine hundred thirty-two more than Y54
- 40 Twenty-two times X21
- 41 Eight times a prime number
- 44 Z14 plus Z5
- 48 First two digits are the same as first two digits of Y45
- 49 Fifty-five times a prime number
- 50 Twenty-four thousand seventy-one less than Y1
- 52 X12 plus X10
- 55 X58 divided by five
- 56 X12 minus X21
- 58 Mean of X55 and X59
- 59 Z50 plus X9

Y Direction

- 1 Twenty-seven times a prime number
- 2 Three-fourths of Z39
- 3 Four thousand two hundred eighty-four less than X48
- 4 Y32 minus Z21
- 7 Five times a prime number
- 21 Eight times a prime number
- 22 X12 minus X31
- 23 Eight thousand four hundred thirty-four more than Y3
- 25 Y45 plus Z1
- 28 X12 minus X9
- 29 Sum of digits in Y46
- 31 Four times X12
- 32 Seven times a prime number
- 33 Twenty-eight times a prime number
- 35 X34 divided by Z50
- 36 Y23 minus Z11
- 42 Seven times a prime number
- 43 Eighty-eight times a prime number
- 45 Y25 minus Y51
- 46 One thousand six hundred twenty-three less than Z21
- 47 Nineteen times a prime number
- 51 A square
- 53 Mean of Z16 and Y58
- 54 Half of Y33, then subtract X56
- 57 Y22 minus Z16
- 58 Eight times X56

Z Direction

- 1 A square
- 3 Three times a prime number
- 4 Y43 minus X58
- 5 A prime number
- 6 Eight times a prime number
- 7 Twenty-three thousand fifty-one more than X27
- 8 X50 minus half of Y21
- 9 A prime number
- 10 Fifteen times a prime number
- 11 Last two digits are the same as last two digits of Y45
- 12 Z50 plus Y57
- 13 X49 plus half of Y31
- 14 A prime number
- 15 Three thousand three hundred forty-one more than Z14
- 16 Mean of Y57 and Y53
- 17 Twice the result of Y45 minus X9
- 18 Forty-nine times a prime number
- 19 Z1 times X14
- 20 Three thousand nine hundred fifty-three more than Z14
- 21 Six hundred eighty-four more than Z10
- 29 A square
- 38 Four times X26
- 39 A square
- 50 Y22 reversed

Solution:

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

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