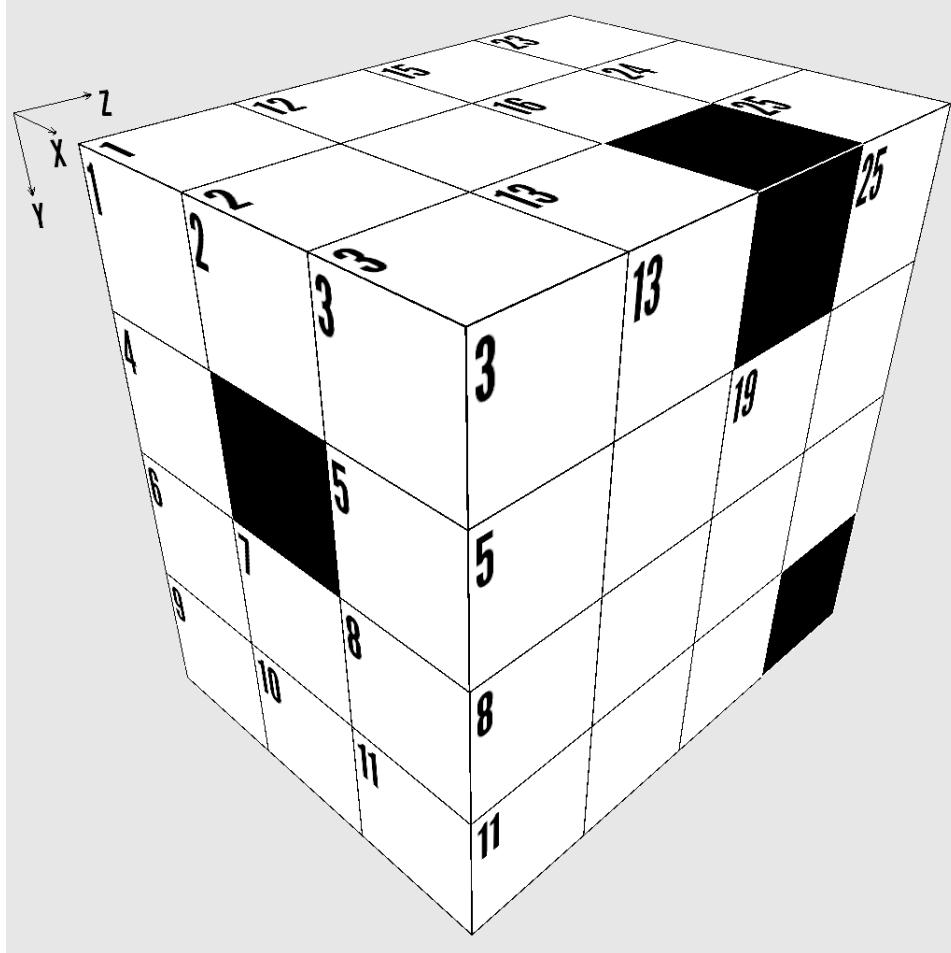


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 47



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" read from:
 - a. X Direction: Left to right
 - b. Y Direction: Top to bottom
 - c. Z Direction: Front to back
3. There is one unique solution which satisfies all the clues given below.
4. 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	15	16		23	24	25
4		5				17	18	19		26	
6	7	8				20	21			27	
9	10	11	14			22			28		

Clues:

X Direction

- 1 First two digits are the same as Z3
- 6 First two digits are the same as first two digits of X22
- 9 Is a prime number
- 12 Last two digits are the same as Z3
- 14 First two digits are the same as X26
- 15 Two-thirds of X26
- 17 Digits are in consecutive descending order
- 20 First two digits are the same as first two digits of Y12
- 22 Three times a square
- 23 Is a prime number
- 26 Digits are in consecutive descending order
- 27 Is a prime number
- 28 Z11 minus X27

Y Direction

- 1 Eight times a prime number
- 3 Last two digits are the same as last two digits of X9
- 7 Digits are the same as last two digits of X6
- 12 Seventy-four times X28
- 13 Is a prime number
- 15 Eleven times a prime number
- 16 Last two digits are the same as Z21
- 19 Three times a prime number
- 24 First two digits are the same as X15
- 25 Is a prime number

Z Direction

- 1 Second and fourth digits are the same
- 2 Fifty-five times X26
- 3 Average of X26 and X27
- 4 Digits are the same as last three digits of Z2
- 5 X6 plus Y25
- 6 Last two digits are the same as last two digits of X17
- 8 Y7 plus Z9
- 9 Five times a prime number
- 10 Last two digits are the same as last two digits of Y24
- 11 Is a prime number
- 18 Digits are the same as last two digits of Y12
- 21 X1 minus X9

Solution is on next page

Solution:

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