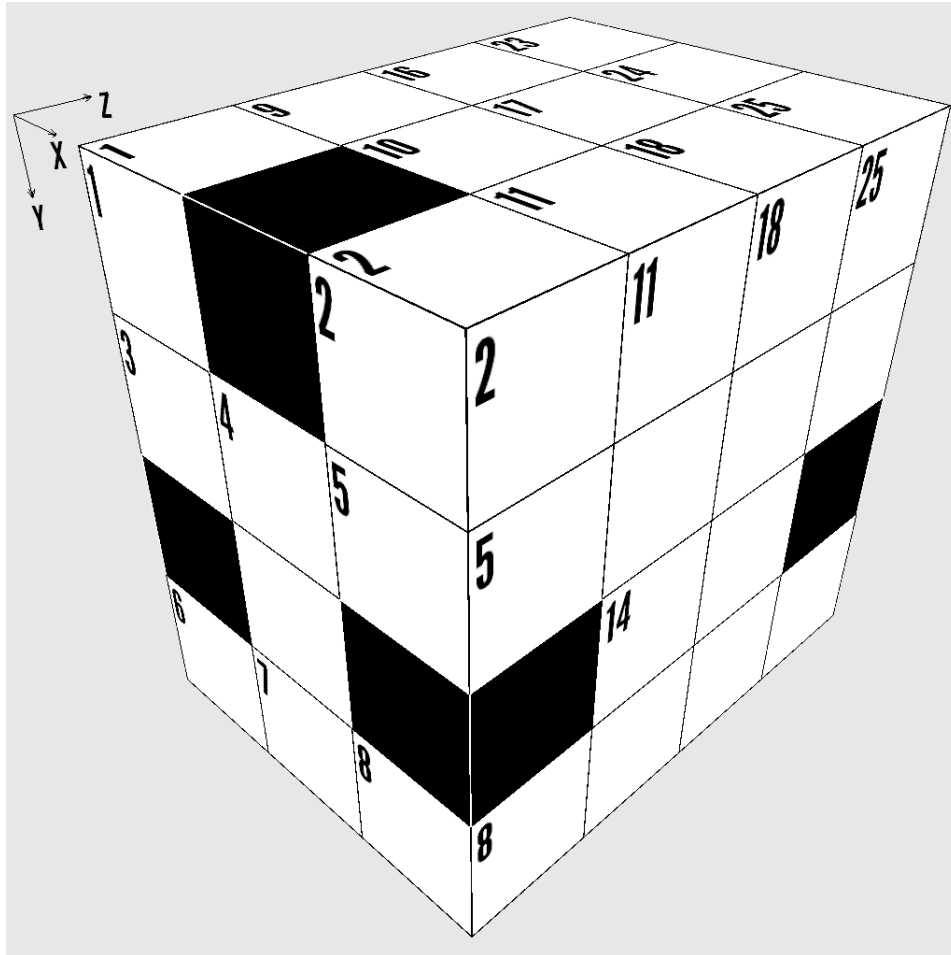


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 37



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	9	10	11	16	17	18	23	24	25
3	4	5	12				19		26		
			13		14	20	21		27		
6	7	8	15			22			28		

Clues:

X Direction

- 3 Is a prime number
- 6 First two digits are the same as X19
- 9 Is a prime number
- 12 Twenty-four times a prime number
- 15 Three times a prime number
- 16 Forty-one times Z3
- 19 Twice Y20
- 20 Last two digits are the same as last two digits of Y17
- 22 Last two digits are the same as last two digits of Y18
- 23 Sixty-three times a prime number
- 26 Twice a prime number
- 27 Is a square
- 28 First two digits are the same as first two digits of Y4

Y Direction

- 1 Is a prime number
- 2 Is a prime number
- 4 Eleven times X19
- 9 Last two digits are the same as last two digits of X3
- 10 Is a square
- 11 Is a prime number
- 17 Fifteen times a prime number
- 18 Three times a prime number
- 20 Sum of the digits of X20
- 23 Is a prime number
- 24 First two digits are the same as Y20
- 25 X20 minus Y2

Z Direction

- 1 Sixty-eight times a prime number
- 2 Rearranged digits of Y9
- 3 Is a prime number
- 4 First two digits are the same as first two digits of Y11
- 5 Last two digits are the same as last two digits of X6
- 6 Last two digits are the same as last two digits of Y23
- 7 First two digits are the same as first two digits of Z2
- 8 Last two digits are the same as last two digits of Y11
- 10 Is a prime number
- 13 Last two digits are the same as Y20
- 14 Sum of the digits of X12
- 21 Is a prime number

Solution is on next page

Solution:

6		8
1	3	9
	0	
2	8	6

8	6	3
7	4	4
3		1
9	3	3

6	9	7
	2	8
1	8	5
4	5	1

8	1	9
4	4	6
4	9	
3	0	3