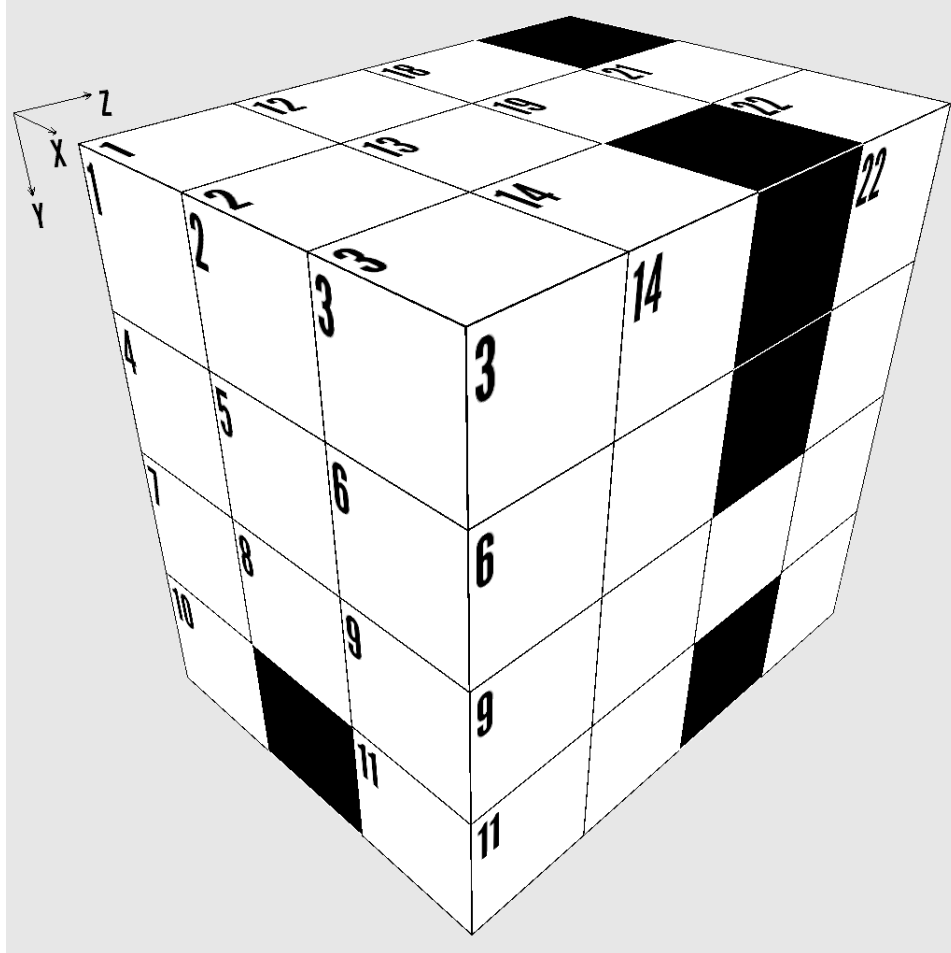


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 40



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	14	18	19			21	22
4	5	6	15							23	
7	8	9	16			20				24	
10		11	17							25	

Clues:

X Direction

- 1 First two digits are the same as Z6
- 4 Is a prime number
- 7 Last two digits are the same as last two digits of Y23
- 12 Digits are in consecutive order
- 15 First two digits are the same as first two digits of X16
- 16 Thirty-three times a square
- 17 Last two digits are the same as X18
- 18 Is a prime number
- 20 Is a prime number
- 21 Digits are the same as last two digits of Z2
- 23 X15 plus X21
- 24 Eight times X18
- 25 Y19 plus Z6

Y Direction

- 1 First two digits are the same as first two digits of Z1
- 2 First two digits are the same as first two digits of Z2
- 3 Twice a prime number
- 12 First two digits are the same as Z4
- 13 First two digits are the same as first two digits of Z5
- 14 Thirty-one times X17
- 19 Last two digits are the same as last two digits of Z5
- 20 Is a square
- 21 Seventy times a prime number
- 22 Fifty-eight times a prime number
- 23 Fourteen times Z11

Z Direction

- 1 Eighteen times a prime number
- 2 Eleven times a prime number
- 3 Digits are in consecutive descending order
- 4 Two-thirds of Z3
- 5 Three hundred twenty-eight more than Y12
- 6 Digits are the same as last two digits of Z9
- 7 Three times a prime number
- 8 Three times a prime number
- 9 Twenty-eight times a prime number
- 10 Twenty-two times a prime number
- 11 Is a prime number

Solution is on next page

Solution:

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