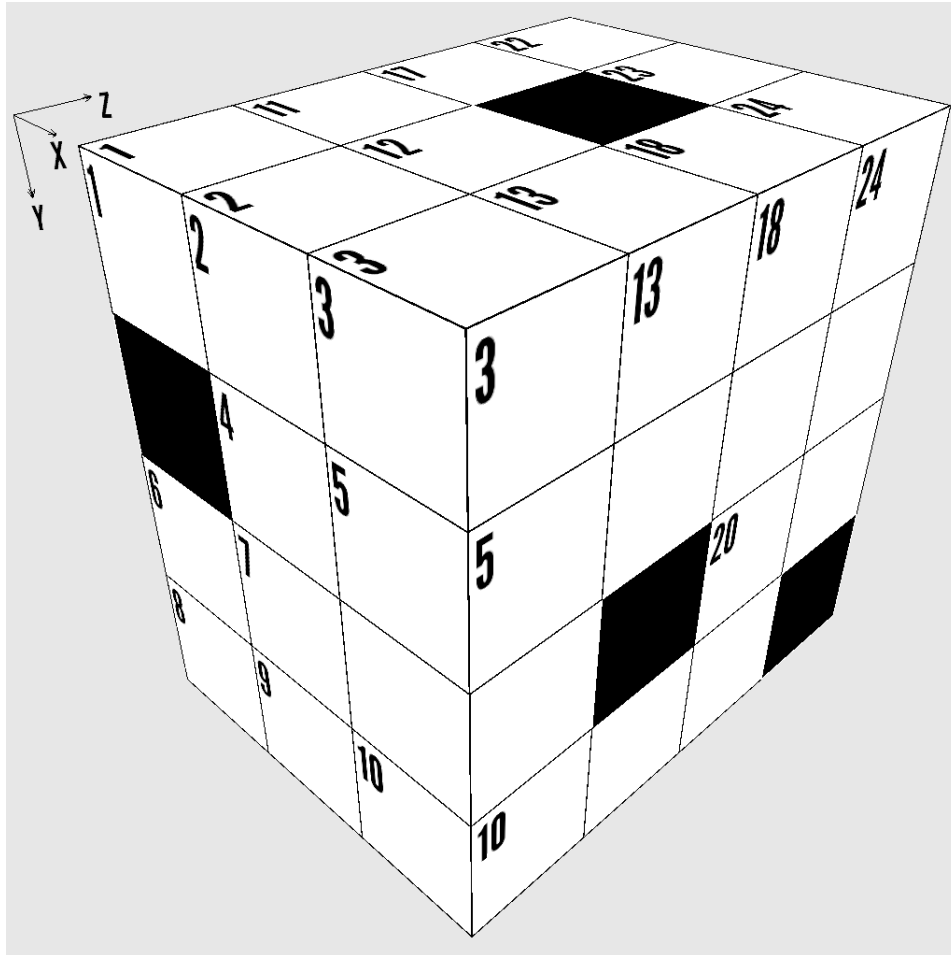


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 24



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

Clues:

X Direction

- 1 First two digits are the same as first two digits of X8
- 4 Digits are the same as last two digits of Y2
- 6 Is a prime number
- 8 Y23 minus Y24
- 11 Average of X1 and Z20
- 14 Is a prime number
- 15 Digits are in consecutive descending order
- 16 Is a square
- 19 First two digits are the same as first two digits of Y18
- 21 Is a square
- 22 Six times a prime number
- 25 Average of X1 and Z7
- 26 Is a prime number
- 27 Twice X15

Y Direction

- 2 Last two digits are the same as last two digits of Y3
- 3 Last two digits are the same as X4
- 6 Two-thirds of X16
- 11 Twelve times X15
- 12 Thirty-one times a prime number
- 13 Is a prime number
- 17 Fourteen times a prime number
- 18 Seventeen times Z6
- 22 Digits are in consecutive descending order
- 23 Forty-one times Y22
- 24 Is a prime number

Z Direction

- 1 Is a prime number
- 2 Digits are in consecutive order
- 3 Twice a prime number
- 4 Three times a prime number
- 5 First two digits are the same as first two digits of X14
- 6 X6 plus X26
- 7 Is a prime number
- 9 Last two digits are the same as last two digits of Y11
- 10 First two digits are the same as Z2
- 14 X25 reversed
- 20 Seven times Z7
- 21 Two-thirds of X16

Solution is on next page

Solution:

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