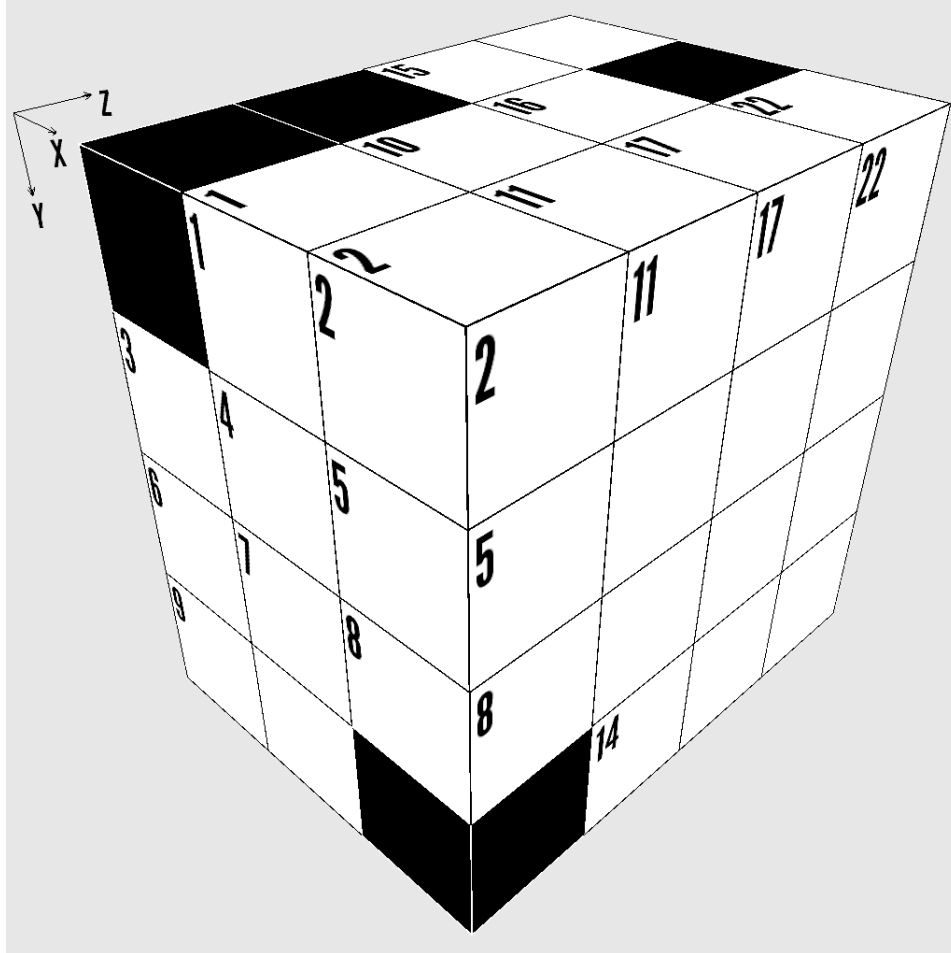


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 49



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

Clues:

X Direction

- 1 Z14 minus X3
- 3 First two digits are the same as X12
- 6 First two digits are the same as first two digits of X20
- 9 Three times X10
- 10 Is a prime number
- 12 Is a prime number
- 13 Twice X24
- 15 Average of X18 and Y24
- 18 Last two digits are the same as last two digits of Y11
- 19 Y23 minus X10
- 20 Average of X12 and Y2
- 23 Digits are in consecutive descending order
- 24 Five times Y13
- 25 Is a prime number

Y Direction

- 1 Is a prime number
- 2 Is a prime number
- 3 Is a prime number
- 10 Average of X20 and X24
- 11 Seventeen times X23
- 13 Digits are the same as first two digits of X13
- 15 Last two digits are the same as last two digits of Z6
- 16 Seven times a square
- 17 Last two digits are the same as last two digits of Z8
- 22 First two digits are the same as X23
- 23 Is a prime number
- 24 Digits are the same as last two digits of X6

Z Direction

- 1 First two digits are the same as X9
- 2 First two digits are the same as first two digits of Y2
- 4 Thirty-eight times Z15
- 5 First two digits are the same as first two digits of Y11
- 6 First two digits are the same as Z15
- 7 Is a square
- 8 First two digits are the same as first two digits of Z9
- 9 Last two digits are the same as last two digits of X6
- 14 Digits are the same as last three digits of Y22
- 15 Is a prime number
- 21 Digits are the same as last two digits of X6

Solution is on next page

Solution:

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