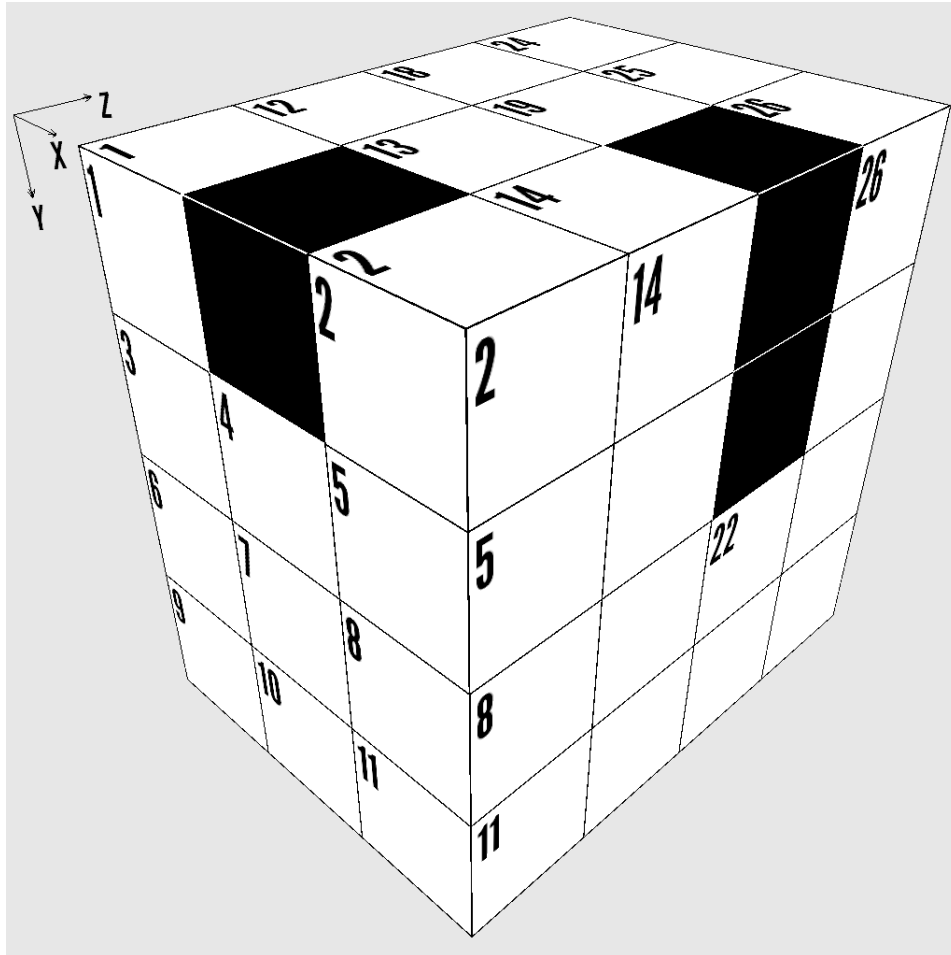


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 53



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	12	13	14	18	19		24	25	26
3	4	5	15			20				27	
6	7	8		16		21		22	28		
9	10	11		17		23			29		

Clues:

X Direction

- 3 Last two digits are the same as X17
- 6 Twenty-two times Z5
- 9 Rearranged digits of Y4
- 12 Twelve times Y22
- 15 First two digits are the same as X18
- 16 Digits are in consecutive descending order
- 17 Is a prime number
- 18 Is a square
- 20 Sum of the digits of Z7
- 21 Fourteen times X16
- 24 Forty-two times a prime number
- 27 Twice X17
- 28 X17 plus Z3
- 29 Last two digits are the same as last two digits of Y2

Y Direction

- 1 First two digits are the same as first two digits of Z7
- 2 Last two digits are the same as last two digits of Y19
- 4 Is a prime number
- 12 X20 plus Z10
- 13 Last two digits are the same as last two digits of Z11
- 14 X12 plus Z1
- 18 Last two digits are the same as last two digits of Z7
- 19 Last two digits are the same as last two digits of X29
- 22 Is a prime number
- 25 Four times a prime number
- 26 First two digits are the same as X27
- 28 Digits are in consecutive descending order

Z Direction

- 1 Is a prime number
- 2 Twice X17
- 3 Digits are in consecutive descending order
- 4 First two digits are the same as first two digits of Y4
- 5 Y1 minus Z7
- 7 Sixty-six times a square
- 8 Last three digits are the same as X29
- 10 Digits are the same as last two digits of X9
- 11 First two digits are the same as X17
- 13 Last two digits are the same as last two digits of X15
- 21 Is a prime number
- 23 Z3 minus X15

Solution is on next page

Solution:

5		8
3	4	3
8	5	8
5	7	4

9	9	6
2	5	9
	3	2
	4	3

2	5	
1	8	
4	4	8
6		3

7	9	8
	8	6
3	6	4
2	8	4