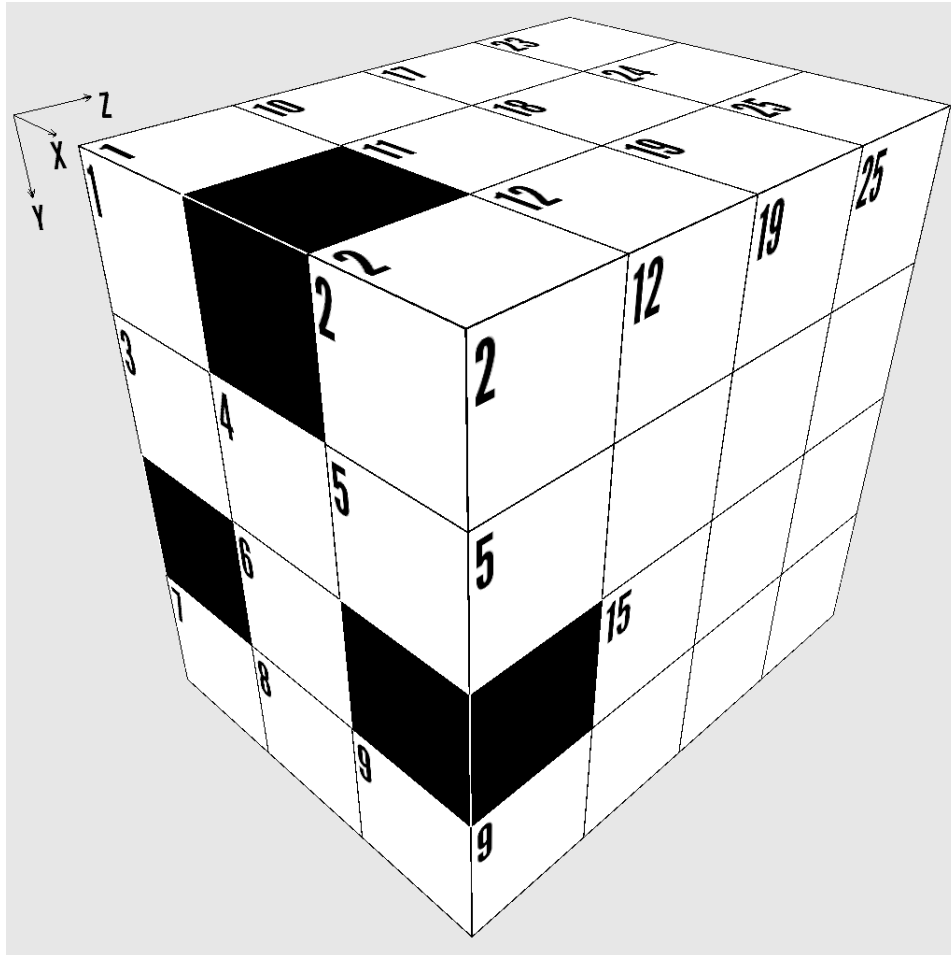


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 50



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

Clues:

X Direction

- 3 Last two digits are the same as last two digits of Y19
- 7 Y4 plus Y10
- 10 Is a square
- 13 First two digits are the same as first two digits of X17
- 14 Seven times X16
- 16 Two-thirds of X21
- 17 Average of X10 and X28
- 20 Twice a prime number
- 21 Digits are in consecutive descending order
- 23 X16 plus X28
- 26 Nineteen times Y17
- 27 Five times a prime number
- 28 Twenty-three times a prime number

Y Direction

- 1 Is a square
- 2 Digits are in consecutive descending order
- 4 Seven times a prime number
- 10 Is a square
- 11 First two digits are the same as first two digits of Z11
- 12 First two digits are the same as Z8
- 17 One-third of Y10
- 18 Three times Y1
- 19 Nine times a prime number
- 23 Is a prime number
- 24 Last two digits are the same as Y1
- 25 Seven times a prime number

Z Direction

- 1 Three times a prime number
- 2 Fifteen times a prime number
- 3 Z4 minus Z11
- 4 Twenty-seven times a prime number
- 5 Twice a prime number
- 6 First two digits are the same as first two digits of X14
- 8 Average of X10 and Y2
- 9 Eleven times a prime number
- 11 Last two digits are the same as last two digits of X26
- 15 First two digits are the same as first two digits of X3
- 22 Two-thirds of Y10

Solution is on next page

Solution:

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