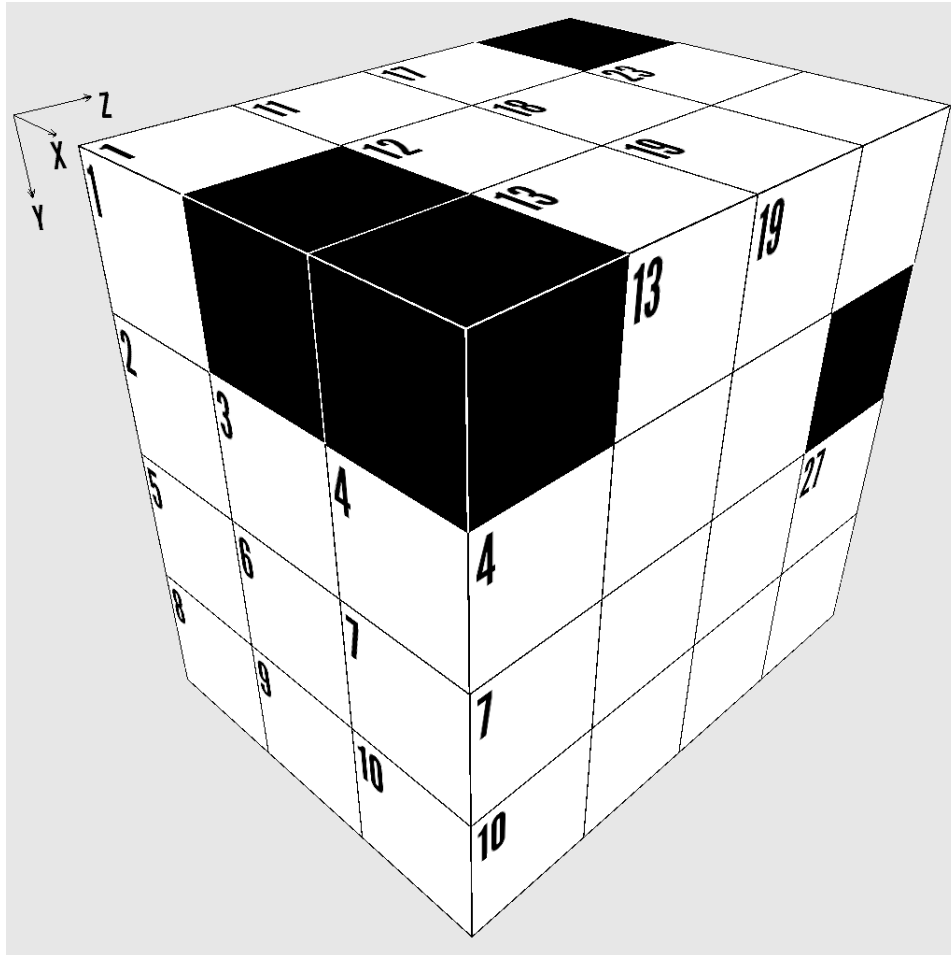


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 30



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			11	12	13	17	18	19			23	
2	3	4				20			24			
5	6	7	14	15		21			25	26	27	
8	9	10	16			22			28			

Clues:

X Direction

- 2 X5 minus Y26
- 5 Last two digits are the same as last two digits of Y3
- 8 Last two digits are the same as last two digits of Y4
- 11 Last two digits are the same as last two digits of Y1
- 14 First two digits are the same as Y14
- 16 First two digits are the same as Y15
- 17 First two digits are the same as first two digits of Y17
- 20 First two digits are the same as first two digits of Y18
- 21 X11 plus X23
- 22 Z7 minus X28
- 23 Sum of the digits of X2
- 25 Digits are in consecutive order
- 28 Thirty-nine times X23

Y Direction

- 1 Four times a prime number
- 3 Is a prime number
- 4 Is a prime number
- 13 First two digits are the same as first two digits of X8
- 14 Z12 minus X2
- 15 Is a prime number
- 17 Is a prime number
- 18 X25 plus Y19
- 19 Is a prime number
- 24 Five times a prime number
- 26 Digits are in consecutive order
- 27 Half of X20

Z Direction

- 1 Z4 minus Y15
- 4 First two digits are the same as first two digits of Y4
- 5 Twice a prime number
- 6 First two digits are the same as first two digits of X28
- 7 Fourteen times a prime number
- 8 Fifty-five times Y15
- 9 Fourteen times a prime number
- 10 Ninety-one times Y27
- 12 Last two digits are the same as last two digits of X17
- 13 First two digits are the same as first two digits of X8
- 20 Sum of the digits of X2

Solution is on next page

Solution:

2		
5	7	3
6	5	1
4	1	7

2	6	4
		1
3	8	4
8	9	7

1	1	1
1	7	0
2	7	9
9	1	3

	1	5
5		
6	7	8
5	8	5