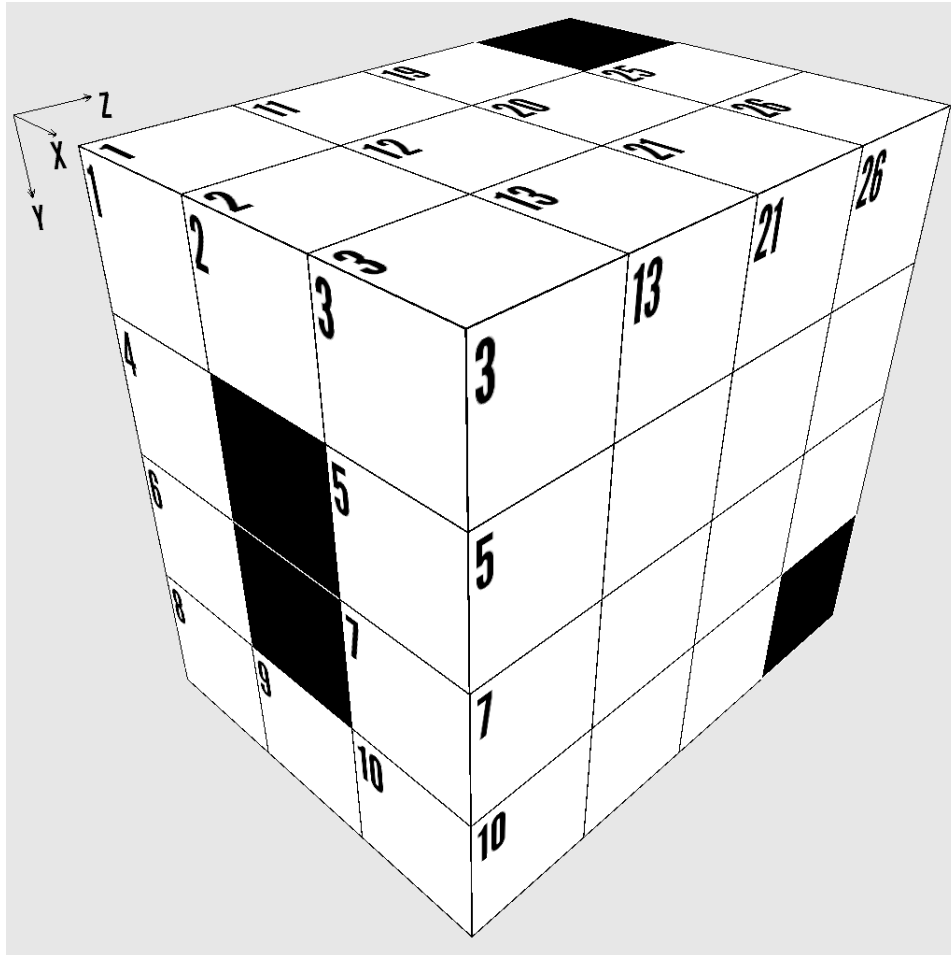


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 51



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

Clues:

X Direction

- 1 Y20 minus Z5
- 8 Z10 plus Z15
- 11 First two digits are the same as first two digits of Z6
- 14 Is a prime number
- 16 Last two digits are the same as last two digits of X19
- 18 X19 reversed
- 19 Is a square
- 22 Nine times a prime number
- 23 Last two digits are the same as last two digits of Z6
- 24 Y26 minus X27
- 25 Digits are the same as last two digits of Z4
- 27 Same as Y27
- 28 Digits are in consecutive order

Y Direction

- 1 Is a square
- 3 Is a square
- 11 First two digits are the same as first two digits of X19
- 12 Last two digits are the same as last two digits of X18
- 13 Eight times a prime number
- 19 Y12 minus Y21
- 20 First two digits are the same as first two digits of Z7
- 21 Twenty times X11
- 26 Rearranged digits of Z17
- 27 Y26 minus X24

Z Direction

- 1 Last two digits are the same as last two digits of X18
- 2 Twenty-two times a prime number
- 3 Is a prime number
- 4 First two digits are the same as first two digits of X19
- 5 Twelve times a prime number
- 6 First two digits are the same as first two digits of Z17
- 7 Y11 plus Z17
- 8 Is a prime number
- 9 Ninety-four times a prime number
- 10 First two digits are the same as first two digits of X18
- 15 Digits are in consecutive order
- 17 Is a prime number

Solution is on next page

Solution:

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