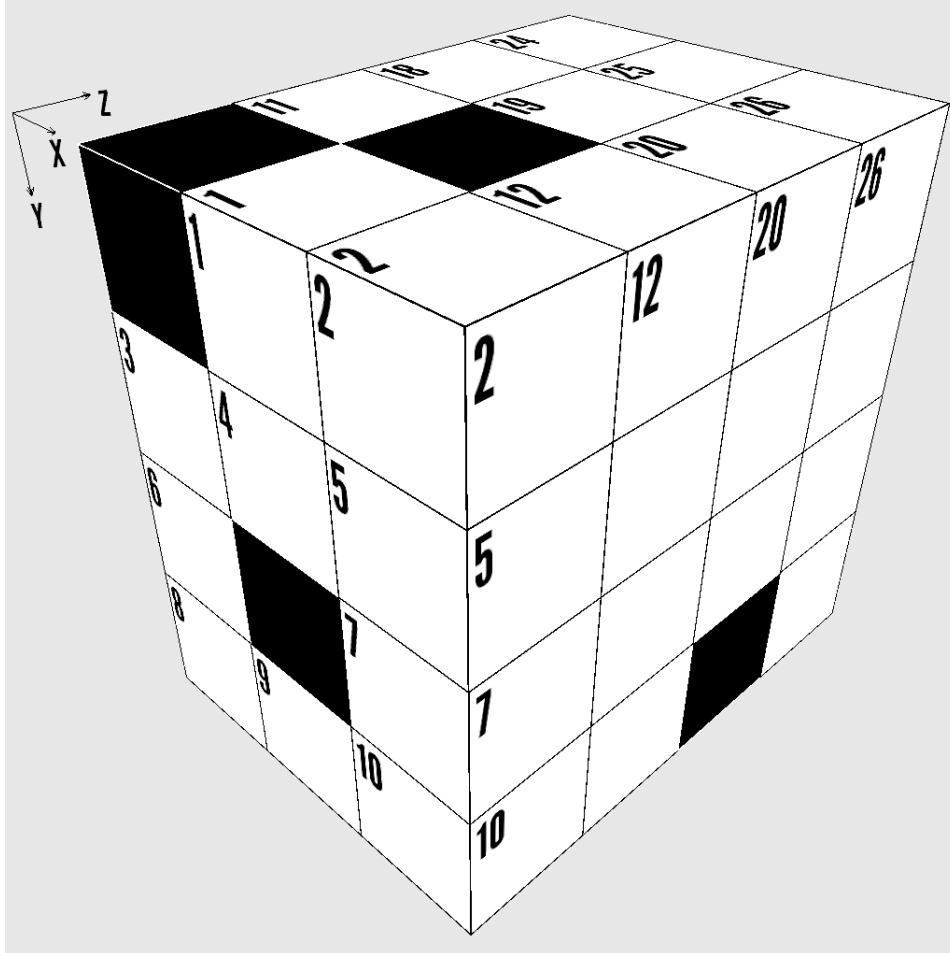


Difficulty: ★★☆☆☆

## 3D Math Puzzle - 3x4x4 Box 9



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

**Clues:**

**X Direction**

- 1 Four times a prime number
- 3 First two digits are the same as first two digits of Y3
- 8 Is a prime number
- 13 Last two digits are the same as last two digits of X8
- 15 First two digits are the same as X23
- 17 First two digits are the same as first two digits of Z9
- 18 Is a prime number
- 21 Digits are the same as last three digits of Z4
- 22 Average of X1 and X17
- 23 X24 minus X27
- 24 Is a prime number
- 27 Digits are the same as last two digits of Z5
- 29 First two digits are the same as first two digits of Y18

**Y Direction**

- 1 Is a prime number
- 2 Last two digits are the same as last two digits of X8
- 3 Is a square
- 11 Last two digits are the same as last two digits of Z8
- 12 First two digits are the same as first two digits of Y19
- 14 Fourteen times Z19
- 18 Forty-three times a prime number
- 19 Forty-seven times a prime number
- 20 Is a prime number
- 25 All digits are the same
- 26 Rearranged digits of Z7
- 28 Seven times Z10

**Z Direction**

- 2 Seven times a prime number
- 3 Z6 minus Y11
- 4 First three digits are the same as Z11
- 5 Thirty-eight times a prime number
- 6 Eight times a prime number
- 7 Four hundred forty-six more than Y18
- 8 First two digits are the same as first two digits of X8
- 9 Last two digits are the same as last two digits of Y11
- 10 Digits are in consecutive order
- 11 Last two digits are the same as last two digits of X8
- 16 Digits are the same as last two digits of Y11
- 19 Average of X27 and Z10

**Solution is on next page**

Solution:

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