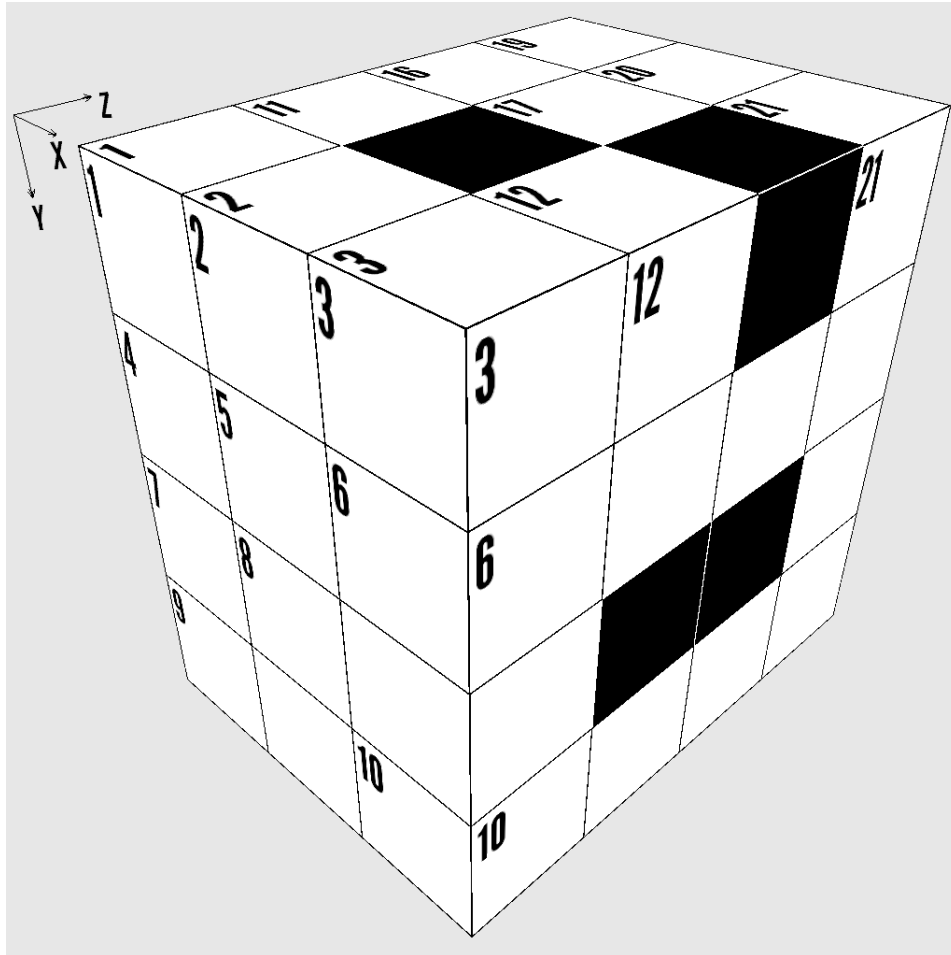


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 12



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	16	17		19	20	21
4	5	6	13	14		18			22		
7	8		15						23		
9		10							24		

Clues:

X Direction

- 1 Last two digits are the same as X16
- 4 Y16 minus X1
- 7 Last two digits are the same as last two digits of Z4
- 9 Forty-three times X16
- 13 Seven times X16
- 15 Is a prime number
- 16 Is a square
- 18 Last two digits are the same as last two digits of Z5
- 19 Fifty-four times X16
- 22 Last two digits are the same as last two digits of Z6
- 23 Four times a prime number
- 24 Nineteen times a prime number

Y Direction

- 1 Second and third digits are the same
- 2 Twice a prime number
- 3 First two digits are the same as Y12
- 11 Seventy-three times Z8
- 12 Average of X15 and Z8
- 14 Is a prime number
- 16 Ninety-four times Y14
- 17 Digits are the same as first two digits of X9
- 19 Eight times a prime number
- 20 Is a prime number
- 21 Seventy-seven times a prime number

Z Direction

- 1 First two digits are the same as first two digits of Y20
- 3 Same as Z17
- 4 Is a prime number
- 5 First and third digits are the same
- 6 Z10 minus Z9
- 7 Four times a prime number
- 8 Digits are the same as last two digits of X7
- 9 First two digits are the same as first two digits of X1
- 10 Nine times a prime number
- 17 All digits are the same

Solution is on next page

Solution:

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