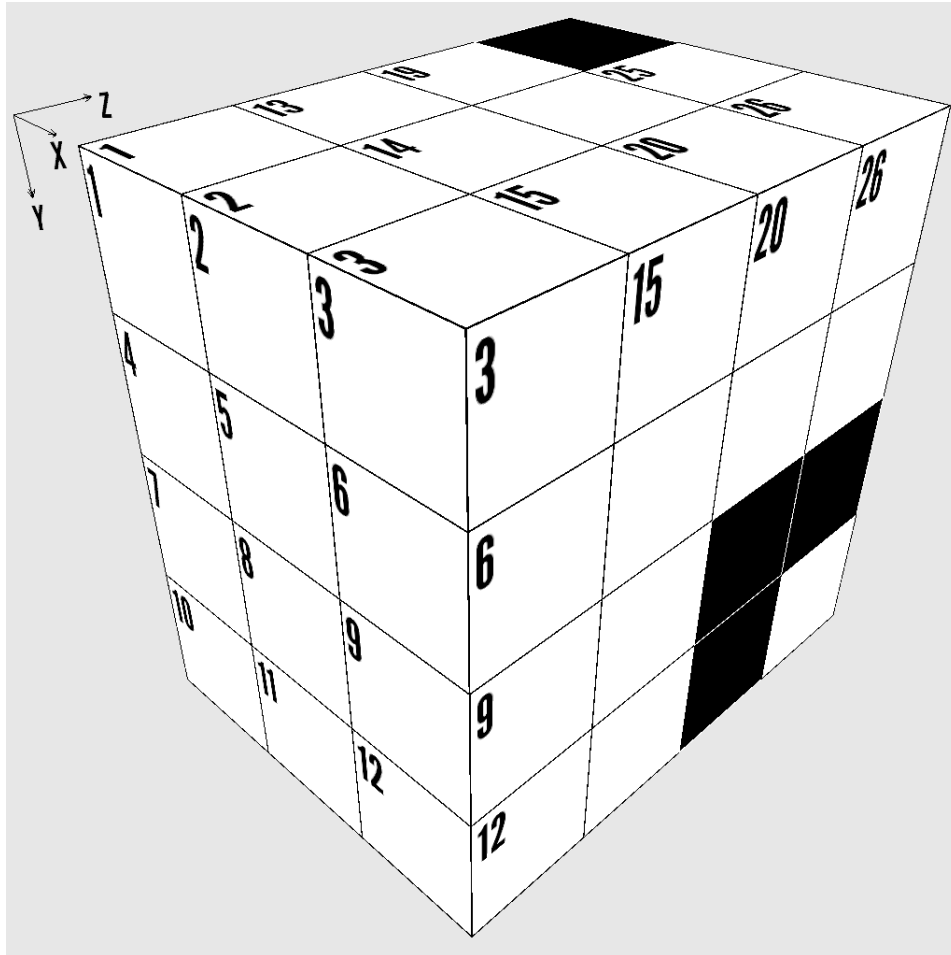


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 45



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

Clues:

X Direction

- 1 Last two digits are the same as last two digits of X17
- 4 Rearranged digits of Z1
- 7 Twenty-five times a prime number
- 10 First two digits are the same as X29
- 13 Z10 minus Y23
- 16 X22 plus Z9
- 17 Thirty-seven times Y26
- 18 Twice a prime number
- 19 Thirty-three times X22
- 22 Digits are in consecutive descending order
- 24 Is a prime number
- 25 Y23 reversed
- 27 Seven times a square
- 28 Digits are in consecutive descending order
- 29 Is a square

Y Direction

- 1 First two digits are the same as first two digits of Z1
- 2 First two digits are the same as X22
- 3 Rearranged digits of Y25
- 14 Three times a prime number
- 15 Twice a prime number
- 17 Digits are the same as first two digits of X19
- 19 Fifty-six times a prime number
- 20 Is a square
- 23 Is a prime number
- 25 Forty-eight times a prime number
- 26 Is a prime number
- 27 Two-thirds of X1

Z Direction

- 1 X16 plus Y27
- 2 Nine times a prime number
- 3 Is a prime number
- 5 Sum of the digits of X19
- 6 Is a prime number
- 7 First two digits are the same as first two digits of Y3
- 8 X25 plus Y2
- 9 Is a prime number
- 10 First two digits are the same as first two digits of X19
- 11 Last two digits are the same as last two digits of Y1
- 12 Digits are the same as last two digits of X10
- 21 X1 minus X25

Solution is on next page

Solution:

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