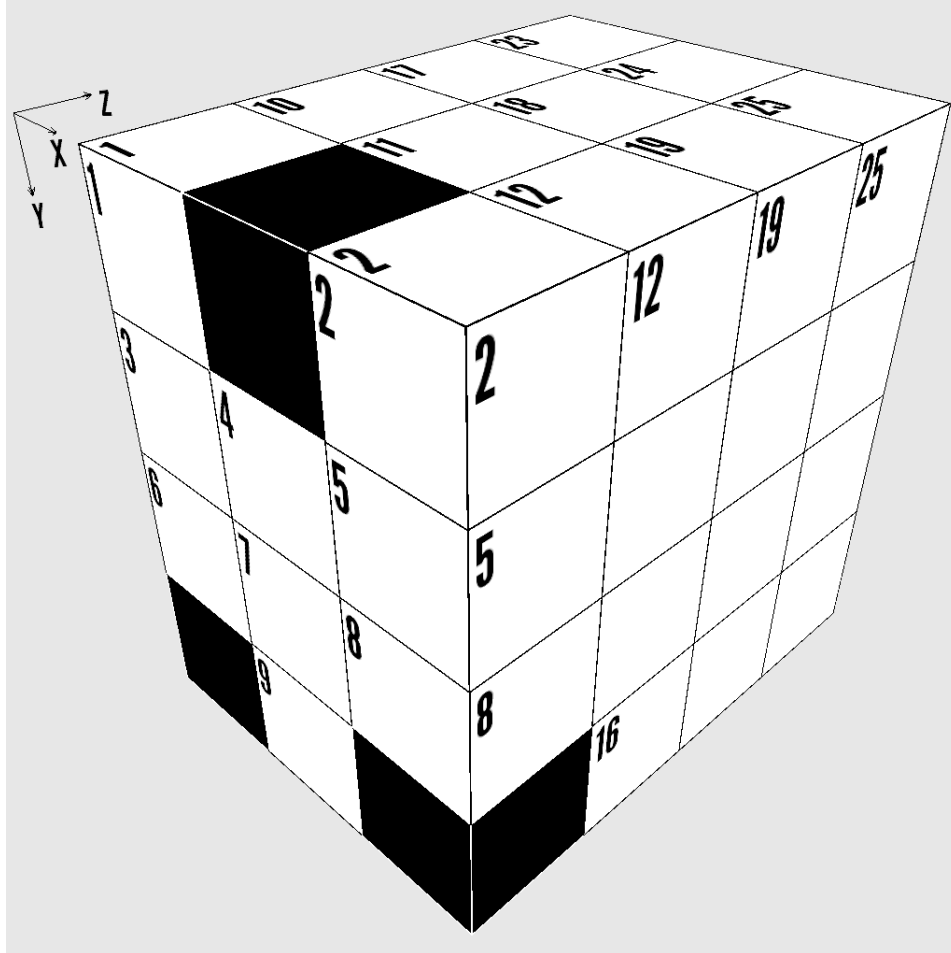


Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 59



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

Clues:

X Direction

- 3 Four times a prime number
- 6 First two digits are the same as first two digits of Y4
- 10 Nine times a prime number
- 13 Is a prime number
- 14 Last two digits are the same as last two digits of Z4
- 15 First two digits are the same as first two digits of Z9
- 17 First two digits are the same as first two digits of Y2
- 20 Nine times Y17
- 21 X13 reversed
- 22 First two digits are the same as Z20
- 23 X13 plus Y1
- 26 Last two digits are the same as last two digits of Z8
- 27 Rearranged digits of Y23
- 28 Digits are in consecutive order

Y Direction

- 1 Last two digits are the same as last two digits of Y19
- 2 Last two digits are the same as X28
- 4 Thirteen times a prime number
- 11 One thousand five hundred thirty-nine less than Z2
- 12 Seventy-four times a prime number
- 14 X23 minus X22
- 17 Digits are in consecutive descending order
- 18 First two digits are the same as first two digits of X20
- 19 First two digits are the same as Z6
- 23 Last two digits are the same as last two digits of Y25
- 24 Last two digits are the same as Y17
- 25 Thirty-seven times X28

Z Direction

- 1 First two digits are the same as first two digits of Z2
- 2 Y18 plus Z16
- 4 Three times a prime number
- 5 Twenty-six times a prime number
- 6 X28 minus X13
- 7 Last two digits are the same as last two digits of X6
- 8 First two digits are the same as first two digits of Y1
- 9 Forty-eight times a prime number
- 11 Is a prime number
- 15 X27 minus X22
- 16 Thirty-three times a square
- 20 Two-thirds of Y14

Solution is on next page

Solution:

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