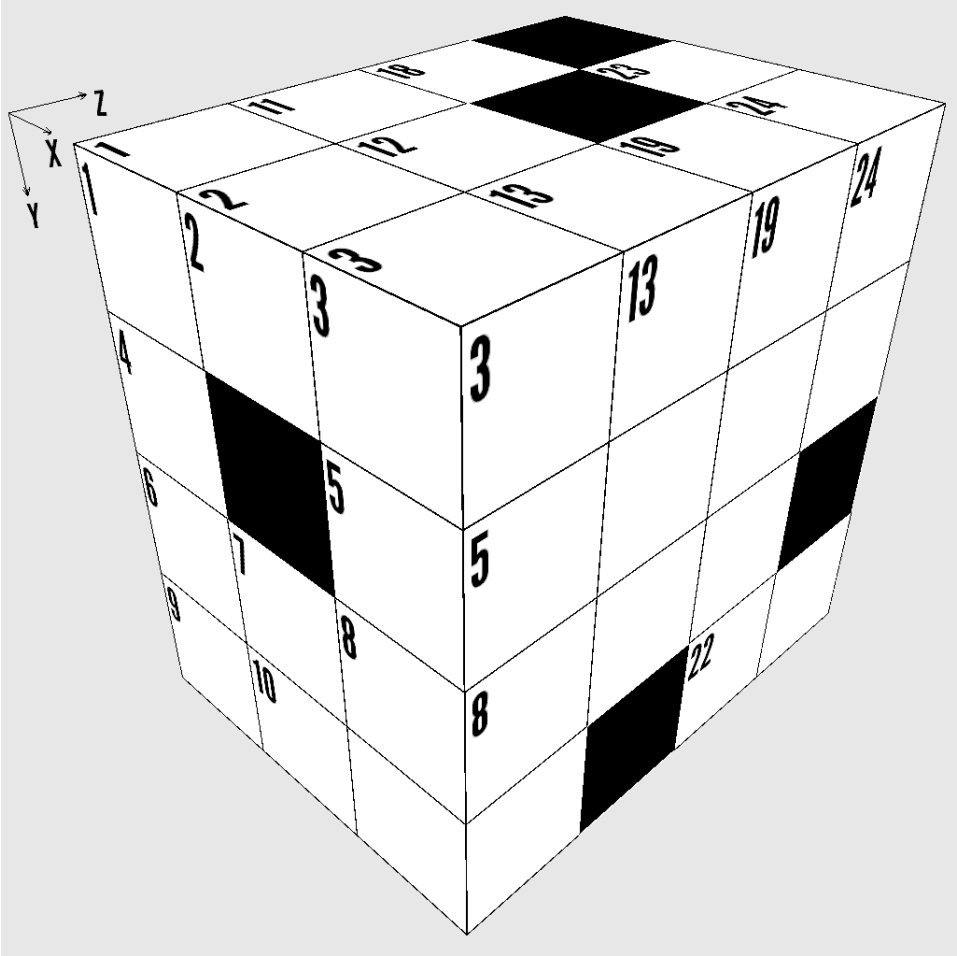
Difficulty: ★★☆☆☆

3D Math Puzzle - 3x4x4 Box 7

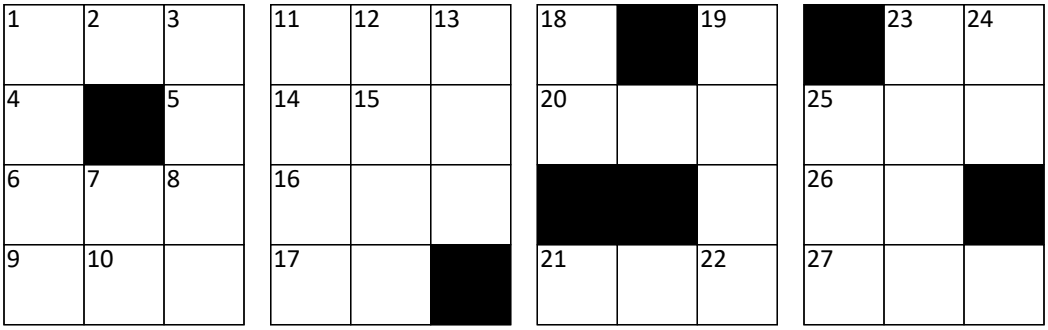


This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X, Y, and Z directions.

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:



Clues:

X Direction

1 X14 plus X26
6 Last two digits are the same as Z7
9 First two digits are the same as first two digits of X25
11 Nine times a prime number
14 First two digits are the same as first two digits of Z8
16 Thirteen times a prime number
17 Digits are in consecutive order
20 Last two digits are the same as last two digits of Y11
21 X6 minus Z22
23 All digits are the same
25 First two digits are the same as first two digits of Y25
26 Digits are the same as last two digits of X9
27 Eight times Y24

Y Direction

1 Nine times a prime number
3 Sixty-eight times a prime number
7 Digits are the same as last two digits of Y12
11 Last two digits are the same as Z2
12 Twice a prime number
13 Is a prime number
18 X17 plus Z22
19 Thirty-seven times a square
23 Four hundred eighty-one more than Z4
24 Digits are in consecutive order
25 Same as X9

Z Direction

1 Twice a prime number
2 Is a prime number
3 Twenty-three times a prime number
4 Thirty-nine times a prime number
5 Twenty-two times a prime number
6 Half of Z22
7 X21 minus X9
8 Four times a prime number
9 Thirty-nine times X17
10 Twice a prime number
15 Eleven times X17
22 Digits are in consecutive descending order

Solution is on next page

Solution: