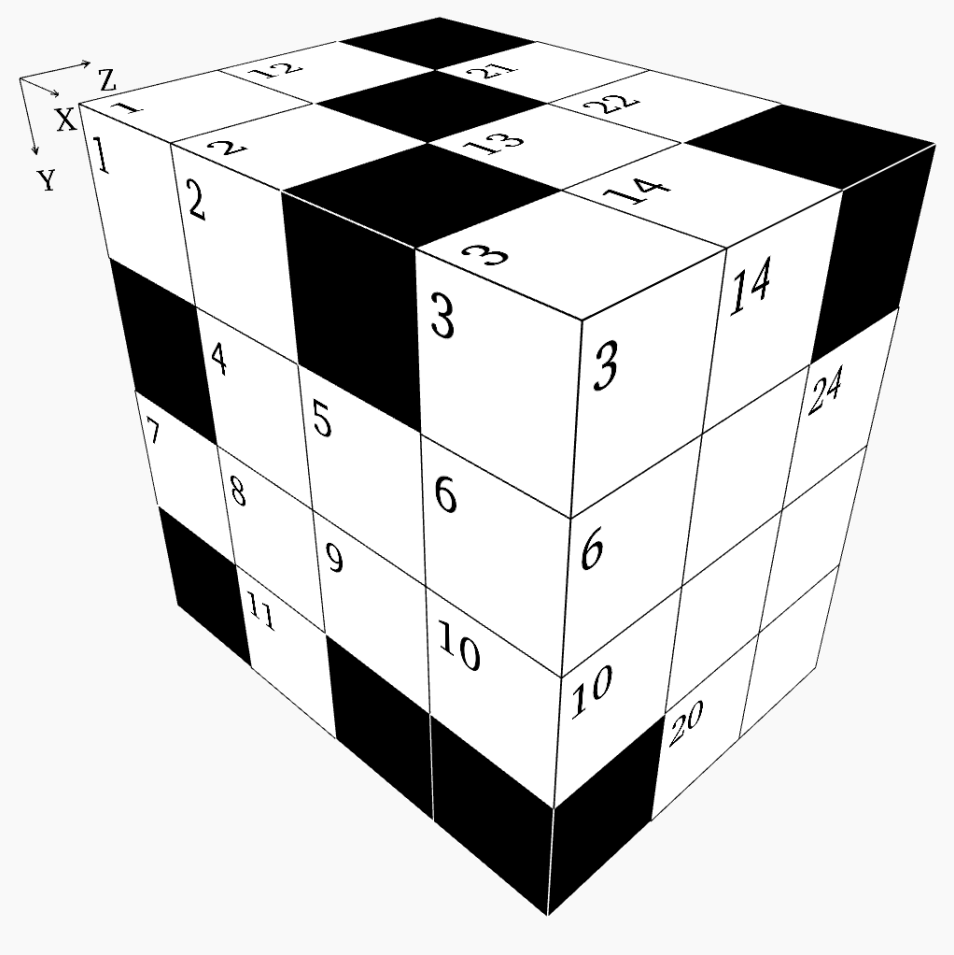
Difficulty: ★★☆☆☆

Box - Challenging Puzzle #62

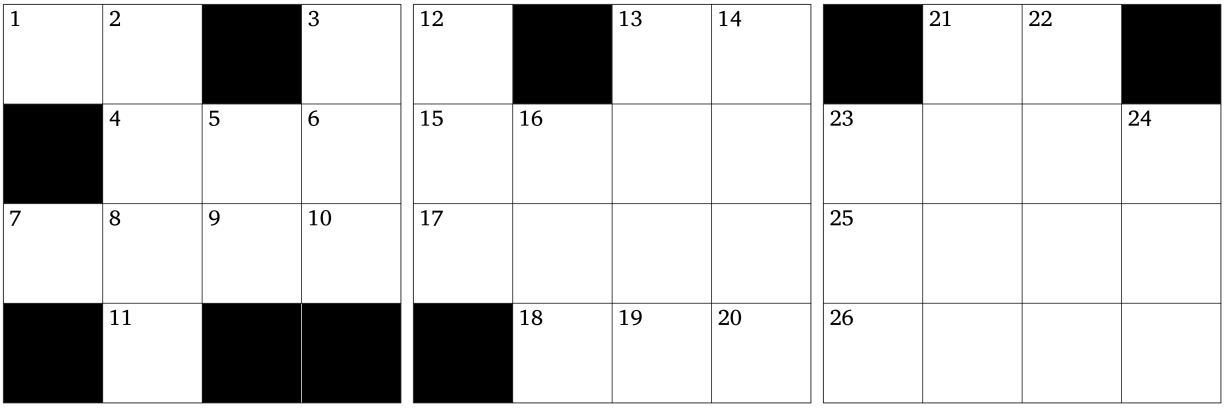


This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X,Y, and Z directions.

Rules:

1. "Words" may not start with a zero.
2. "Words" in the X direction read from left to right.
3. "Words" in the Y direction read from top to bottom.
4. "Words" in the Z direction read from front to back.
5. There is one unique solution which satisfies all the clues given below.
6. Some "words" may not have clues. They will be determined by the "words" which intersect them.

If we take the box pictured above and divide it into individual X-Y layers, we will get these planes:



X Direction

1 A square
4 Thirteen times a prime number
7 Seventy-nine times Z19
13 X23 divided by Z15
15 Thirty times a prime number
17 Seven times a prime number
18 Z8 minus Z6
21 X18 divided by four
23 Twenty-eight times X1
25 Twice a prime number
26 Nine times a prime number

Y Direction

2 A prime number
3 A prime number
5 X7 divided by seventy-nine
12 Thirty-nine times Z3
13 Four times a prime number
14 Ninety-seven times Z15
16 Mean of Y5 and Y22
21 Twenty times a prime number
22 A square
23 A prime number
24 Seventeen times Z13

Z Direction

1 Y24 minus Z4
3 Z19 minus Z20
4 Twice the result of Z11 plus X1
5 Twice the result of Y12 minus Z9
6 One hundred sixty-three less than Y16
7 Mean of Y24 and Y5
8 Rearranged digits of Z4
9 Eighteen times a prime number
10 X26 minus X21
11 Ten times a prime number
13 Mean of Y5 and X21
15 Y12 divided by thirteen
19 Z10 divided by sixteen
20 Y5 minus Z3

Solution: