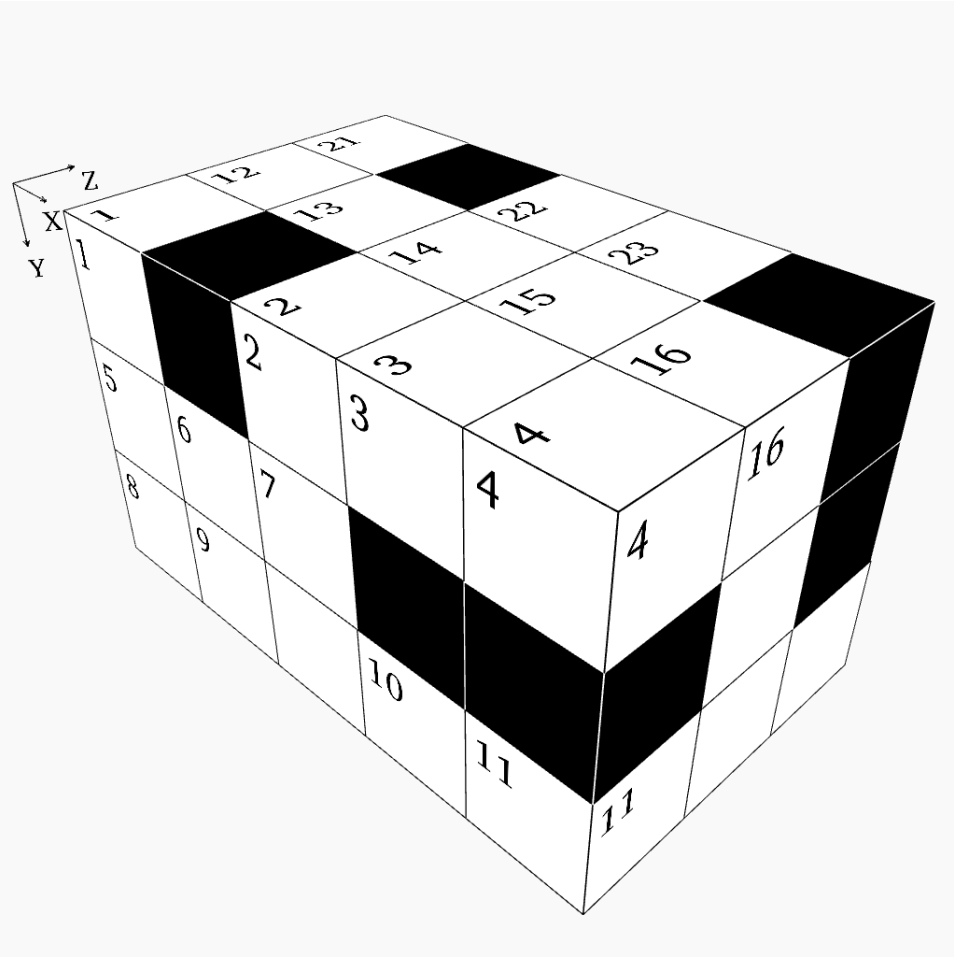
Difficulty: ★☆☆☆☆

Box - Intermediate Puzzle #48

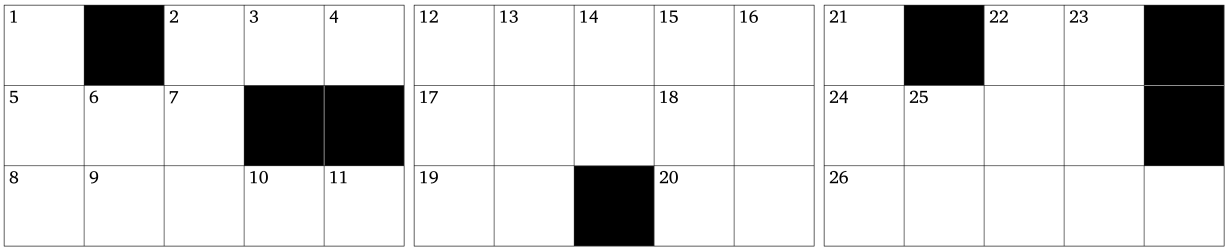


This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X,Y, and Z directions.

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

2 Y22 plus half of Y21
5 Half of Z8, then subtract Y14
8 Eleven times a prime number
12 Three thousand eight hundred eighty-two less than X17
17 Nine times a prime number
19 Y23 minus X22
20 Y22 divided by five
22 Z10 divided by seven
24 Ninety times X19
26 Nine times a prime number

Y Direction

1 Y6 plus Z6
2 Z2 minus Y6
6 A square
12 Twice a prime number
13 Z2 minus Y25
14 X19 minus Z18
15 Twice Y23
16 Fifty-four times a prime number
21 Eight times a prime number
22 Fifteen times Y6
23 X12 divided by Z10
25 X19 minus Z18

Z Direction

1 Y21 divided by four
2 Twice the result of Z1 plus Y12
3 Y16 minus Z6
4 Three-fifths of X5
5 Mean of Y6 and Z1
6 Z1 minus X22
7 Consecutive digits unordered
8 Y13 minus Y15
9 Y2 plus Z18
10 Mean of Y25 and Z1
11 A prime number
18 X2 minus Z9

Solution: