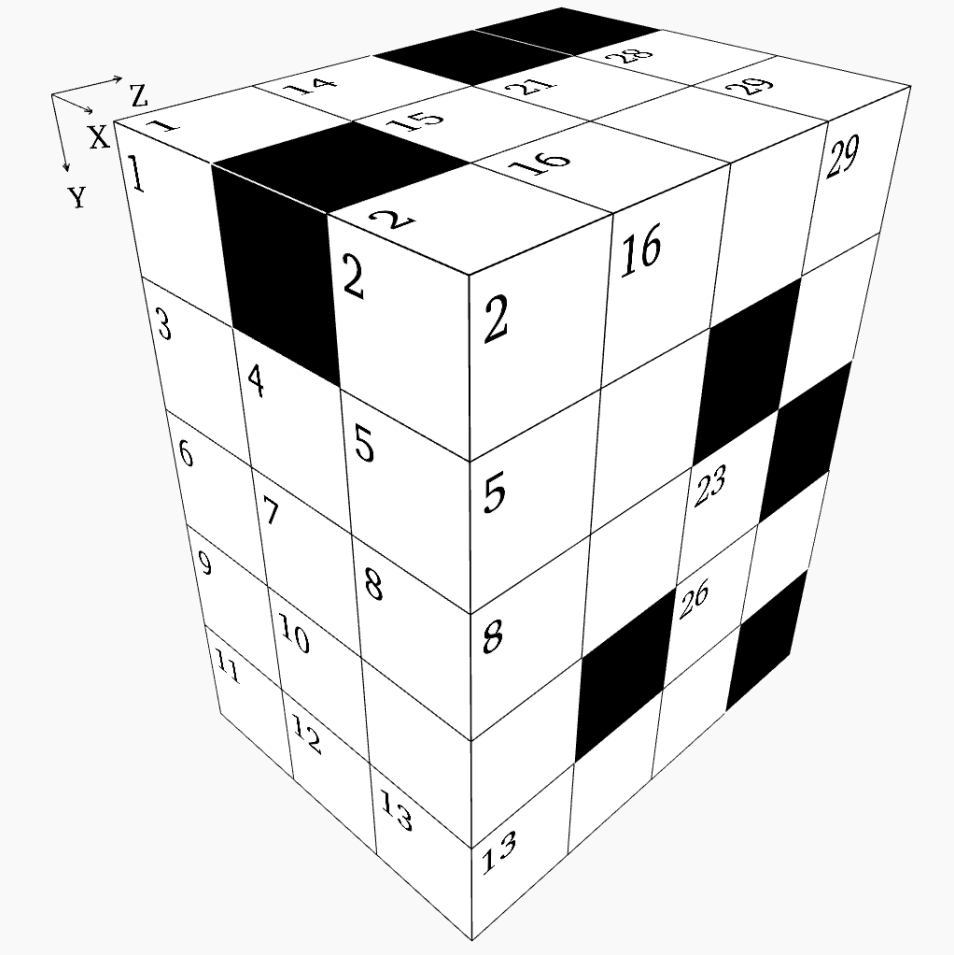
Difficulty: ★★☆☆☆

Box - Challenging Puzzle #50

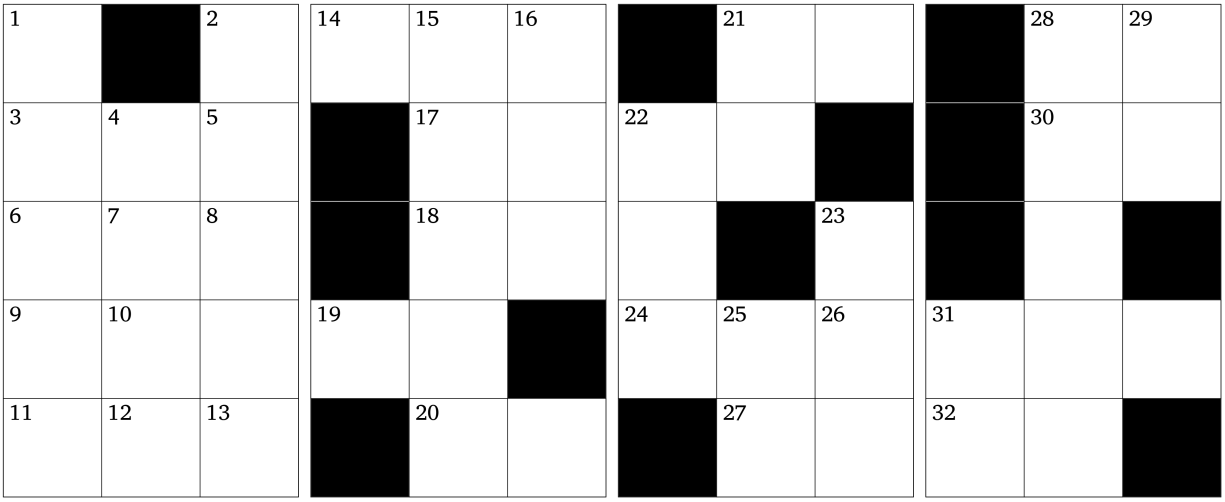


This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X,Y, and Z directions.

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

3 Seven times a prime number
6 A prime number
9 Four times a prime number
11 Mean of Y23 and X17
14 Z1 plus X31
17 Z13 minus X11
18 A square
19 Six times Z5
20 Y21 divided by four
21 Z7 minus X28
22 X32 plus Y29
24 X18 times X32
27 Mean of Z26 and Y21
28 A square
30 X32 reversed
31 Twice a prime number
32 Y29 minus Z5

Y Direction

1 Nine times a prime number
2 Fourteen times a prime number
4 Y2 minus Z2
15 Three times a prime number
16 Y22 plus Z26
21 X32 plus Z1
22 X24 minus Z5
23 Six times a prime number
25 Half of X19, then subtract Z1
28 Y1 plus Z26
29 Mean of X22 and Z5
31 X27 minus Y25

Z Direction

1 X22 minus X21
2 Seventy-nine times X28
4 Twenty-one times a prime number
5 A square
7 X18 plus X21
8 Seventeen times Z26
9 A prime number
10 Seventy-seven times X17
12 Seventeen times a prime number
13 Same as Y23
15 Mean of Y22 and X20
26 Mean of Z5 and X19

Solution: