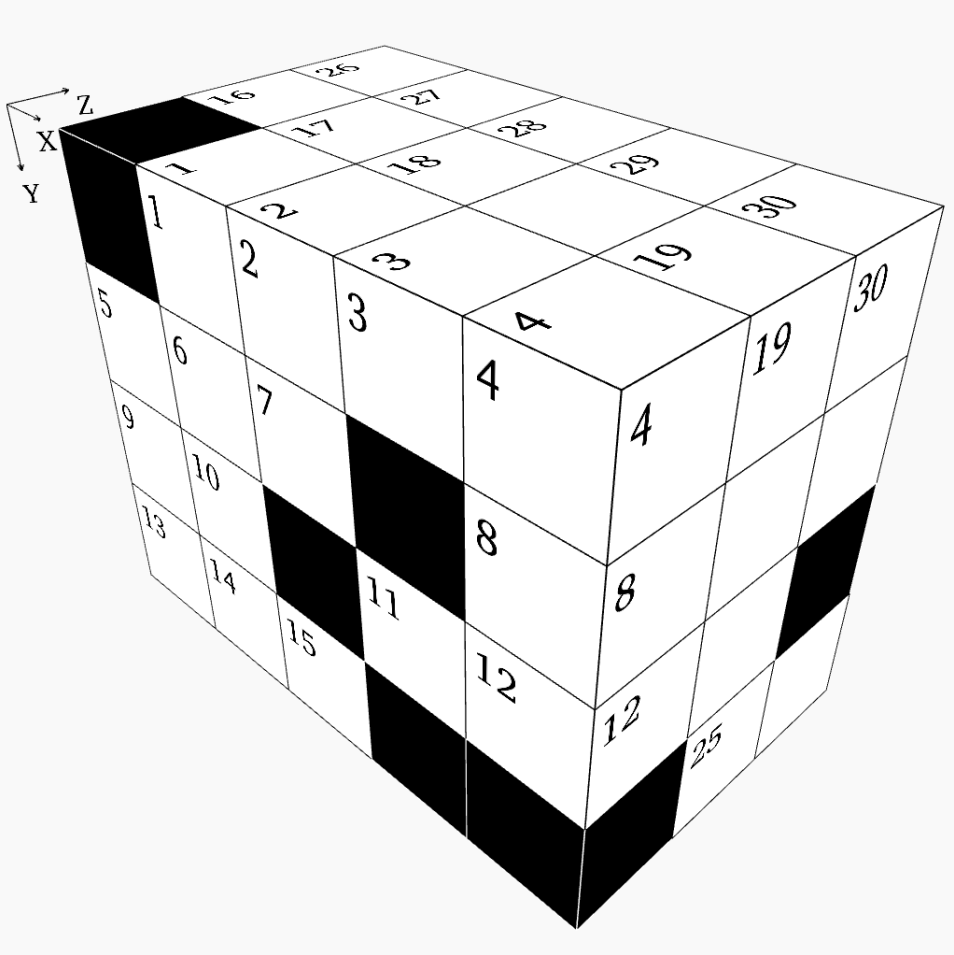
Difficulty: ★★☆☆☆

Box - Challenging Puzzle #28

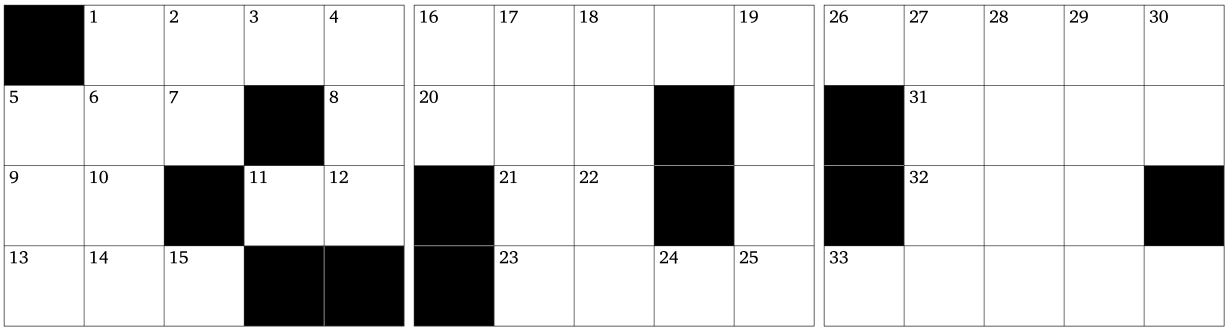


This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X,Y, and Z directions.

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 Twenty-six times X21
5 Y27 minus Z6
9 X21 divided by four
11 Z8 divided by X9
13 Z15 minus Z24
16 A prime number
20 Z3 plus Z22
21 X5 minus X32
23 One thousand forty-seven less than Y28
26 A prime number
31 Twenty-two times a prime number
32 Thirty times a prime number
33 A prime number

Y Direction

1 Three times a prime number
2 Twice the result of X13 minus Z16
4 Y19 divided by thirty-one
5 Z3 plus Z24
16 Y29 minus Z3
17 Six hundred sixty-five more than Y1
18 Mean of Y19 and X1
19 Nine hundred thirty more than X23
27 Sixty-nine times X9
28 Ninety-one times a square
29 A cube
30 X9 reversed

Z Direction

1 Consecutive digits unordered
2 A prime number
3 Y29 minus Z5
4 Y28 divided by Z22
5 Same as Y16
6 A square
7 A prime number
8 Fourteen times a prime number
10 Z14 plus Z1
12 X21 minus Z25
14 A prime number
15 Mean of Z16 and Z14
16 Mean of X9 and Z14
22 A cube
24 Sum of digits in X33
25 Z22 plus Z24

Solution: