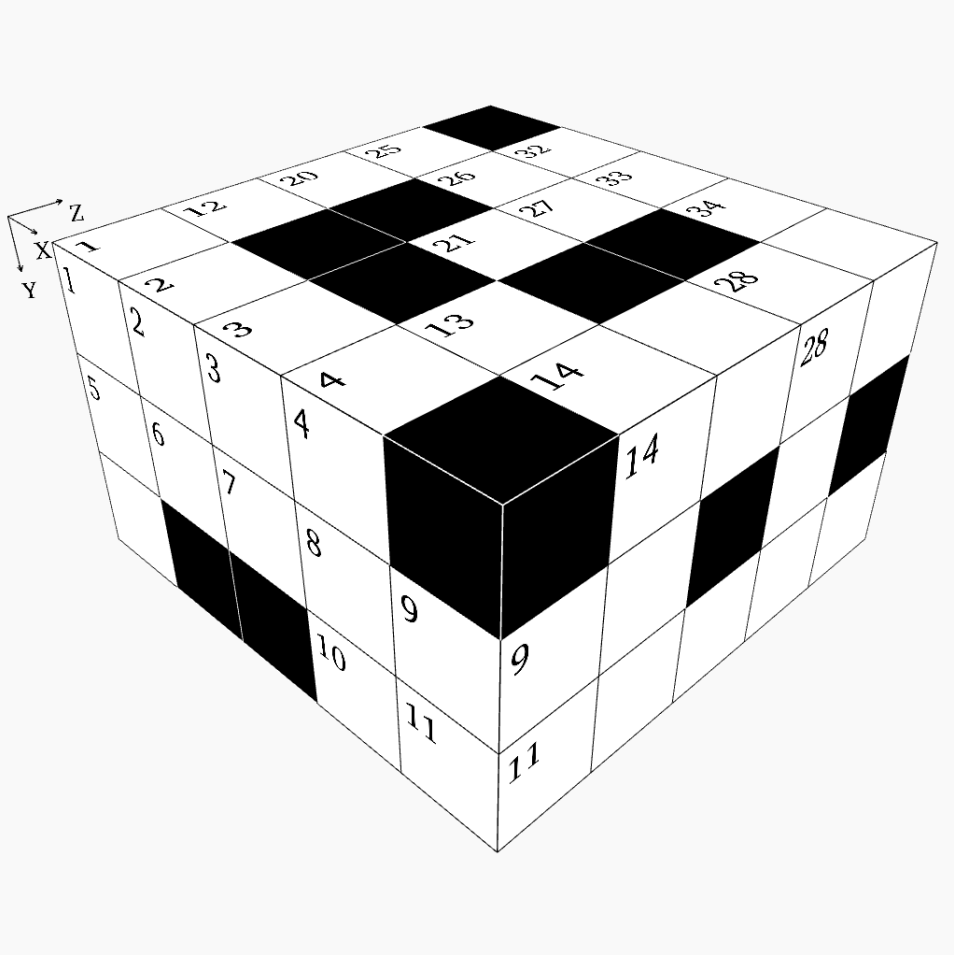
Difficulty: ★★☆☆☆

Box - Challenging Puzzle #9

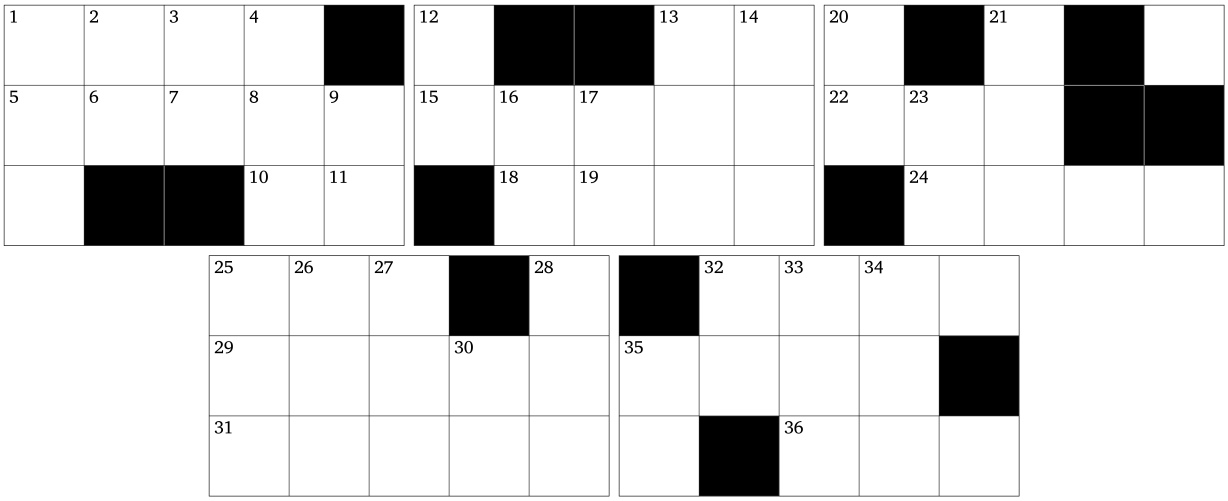


This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X,Y, and Z directions.

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 Z7 divided by Z9
5 Eighty-three times a prime number
10 Mean of Z8 and X13
13 Z31 plus Z8
15 Thirty times a prime number
18 Half of X32, then subtract X10
22 Z8 plus Y32
24 Z6 minus Z1
25 A prime number
29 Eight times a prime number
31 Z10 plus Y33
32 Thirty-eight times a square
35 Seventy-six times Y23
36 Mean of Y2 and Y1

Y Direction

1 Y34 minus Z4
2 X36 minus half of Y32
3 Mean of Z9 and Y12
4 Twice the result of Z18 minus Y1
9 Z8 reversed
12 Y2 minus Y23
13 Z21 plus half of Y25
14 Mean of Y32 and Y13
16 Z30 minus Z9
17 Mean of X36 and Z26
20 Z7 divided by Y27
21 Same as Z21
23 Y32 reversed
25 Twice a prime number
26 Y14 minus Z9
27 Thirty-six times Z9
28 Y33 plus Y34
30 Sum of digits in X29
32 X10 plus Y23
33 A prime number
34 X25 minus Y14
35 Y17 minus Z31

Z Direction

1 Mean of Y13 and X35
4 Three-fourths of Y32
5 Fourteen times a prime number
6 Twelve times a prime number
7 Three thousand four hundred fifty less than X15
8 Mean of Y12 and Z9
9 Y35 minus Y16
10 Y28 times Z31
11 Last three digits are the same as Z21
14 Its digits total Y35
18 Y14 minus Z9
19 Seventy-seven times a prime number
21 Three times a prime number
26 A square
30 Z26 minus Y30
31 A square

Solution: