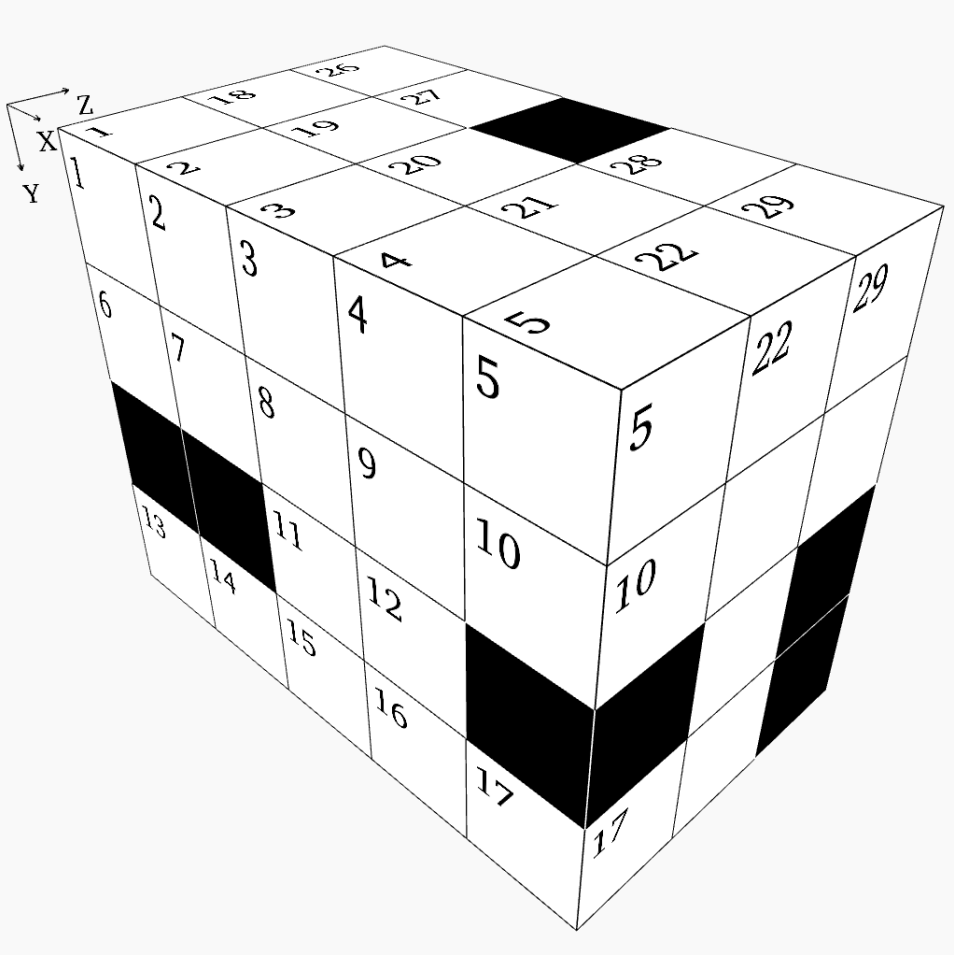
Difficulty: ★★☆☆☆

Box - Challenging Puzzle #57

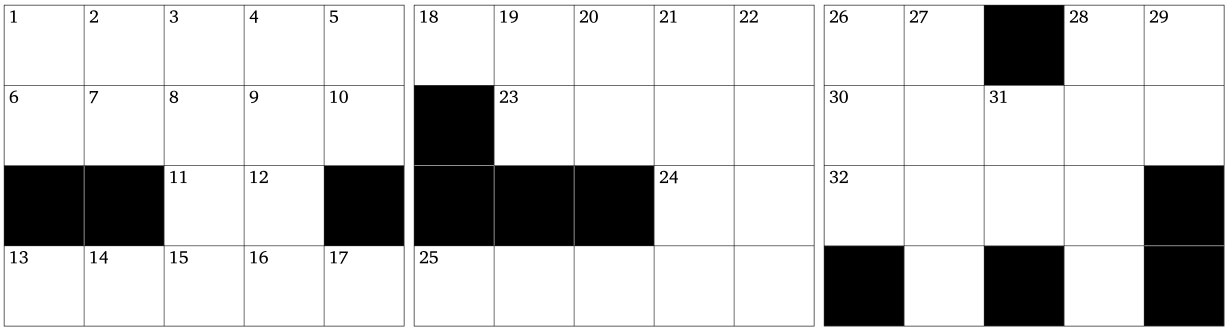


This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X,Y, and Z directions.

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 Thirty-three times a prime number
6 A prime number
11 Z15 plus Y20
13 Eighty-nine times a prime number
18 X13 minus Y31
23 Z8 times Y5
24 Sum of digits in X25
25 Seventeen thousand seven hundred thirty-two less than X6
26 Mean of Y29 and Y19
28 Y1 minus Y2
30 A prime number
32 Consecutive digits unordered

Y Direction

1 Y3 divided by Y26
2 Z5 minus Z17
3 First two digits are the same as X11
4 Mean of Y28 and Z13
5 Same as Y2
19 Y31 minus Y1
20 X24 plus Y2
21 Fifty-seven times a prime number
22 Thirty-five times a prime number
26 Six times a prime number
27 Eleven times a prime number
28 A prime number
29 Z15 minus Y19
31 Twice Y29

Z Direction

1 Mean of Y26 and Z9
2 Y20 plus Z13
3 Twice Y20
4 Y27 minus Y21
5 Z17 plus Y5
7 Forty-two times Y19
8 X23 divided by Y2
9 First two digits are the same as first two digits of Y21
10 Z7 minus Y1
12 Five times a prime number
13 Z15 plus Y19
14 Mean of X26 and Z1
15 Z4 minus Z3
16 A prime number
17 Z4 minus Y20

Solution: