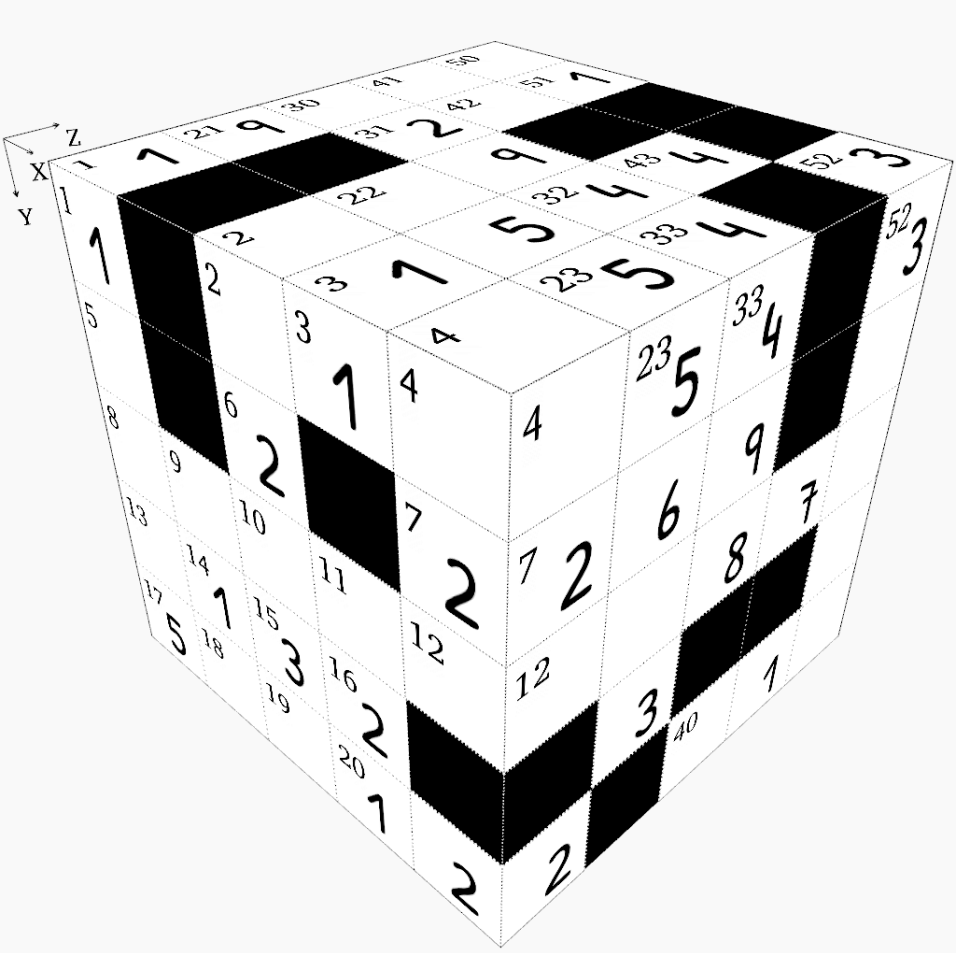
Difficulty: ☆☆☆☆☆

Cube - Beginner Puzzle #14

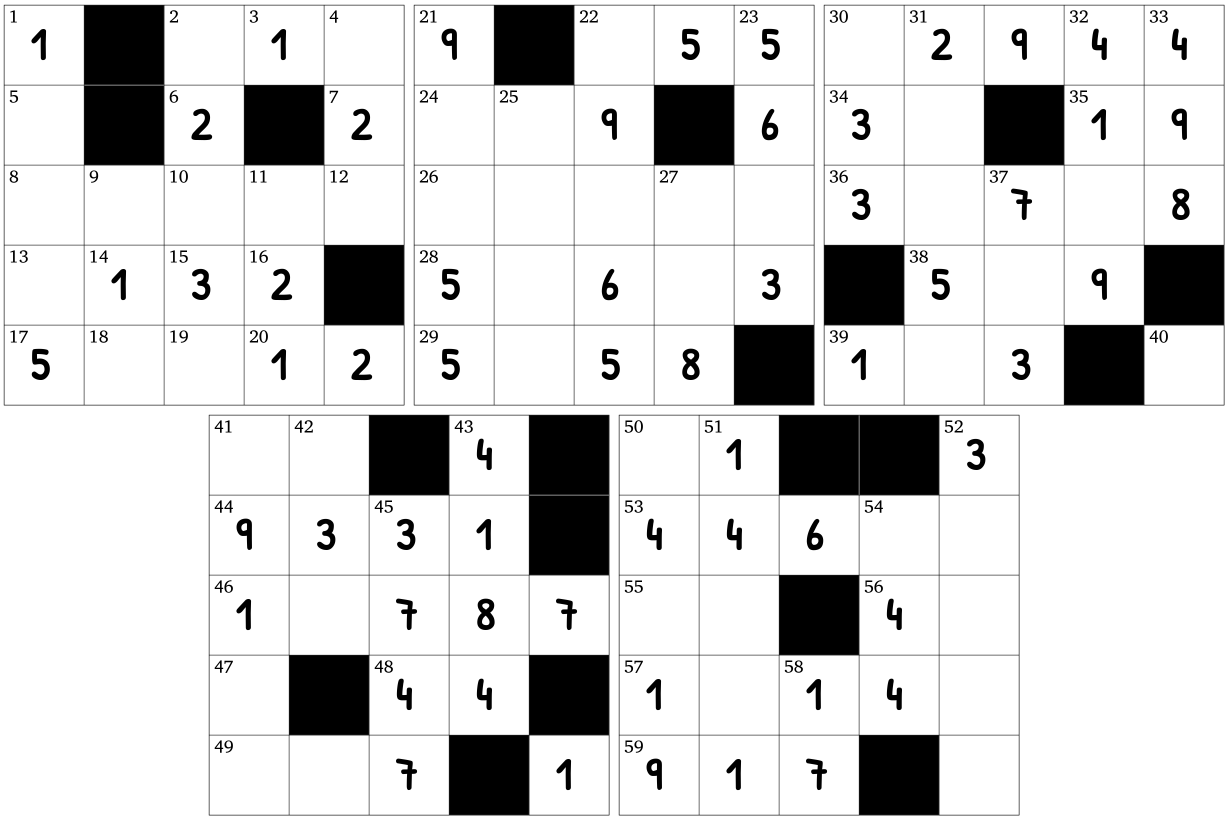


This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X,Y, and Z directions.

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 cube pictured above and divide it into individual X-Y layers, we will get these planes:



X Direction

2 Y30 minus Z2
8 Mean of X30 and X36
13 X24 plus Y30
17 Mean of Y31 and Z18
22 Mean of X49 and X34
24 A prime number
26 Nine thousand seven hundred thirty-seven less than X53
28 Nineteen times a prime number
29 Fourteen times a prime number
30 Last two digits are the same as last two digits of X57
34 Three-fourths of X48
35 X39 divided by seven
36 Twenty-two times a prime number
38 Thirty-one times X35
39 Z15 divided by X49
41 A square
44 One hundred sixty-four less than Y25
46 Forty-seven times a prime number
48 X50 minus Y58
49 Mean of Y4 and X39
50 Z40 minus half of Y27
53 Four thousand nine hundred forty-four more than Y52
55 Y9 minus Y30
56 X46 divided by Y4
57 Two thousand five hundred forty-two less than Z1
59 Y9 reversed

Y Direction

1 Two thousand three hundred seventy-two less than X46
2 A prime number
4 Z4 minus X34
9 Z31 plus Y27
11 A prime number
21 Last two digits are the same as last two digits of X22
22 First two digits are the same as first two digits of Z14
23 A prime number
25 Forty-five times Z31
27 X38 minus X41
30 Y25 divided by Z13
31 Sixty-nine times a prime number
32 A prime number
33 Mean of Y9 and X49
37 Y54 minus X50
41 Fourteen thousand seven hundred sixty-eight more than Z5
42 A prime number
43 Eight times a prime number
45 Three times a prime number
50 Fifty-three times a prime number
51 Seventeen times a prime number
52 Mean of Y50 and Y51
54 Z47 plus Y37
58 Z47 minus X48

Z Direction

1 Two thousand two hundred seventy-one more than Y1
2 Mean of X24 and Y42
3 Z11 divided by Z45
4 Y33 minus X48
5 Eighteen times a prime number
6 X48 minus Z13
7 Mean of Y11 and Y58
8 Six thousand four hundred seventy-seven more than Z15
9 Fourteen thousand eight hundred sixty-six less than Y41
10 Forty-seven times a prime number
11 Seven thousand seven hundred thirty-three more than X8
12 Seventy-nine times a prime number
13 Z40 divided by twenty-one
14 Thirteen times Z13
15 Eleven thousand ten less than X8
16 Two thousand three hundred nine less than Y31
17 Twenty-nine times a prime number
18 One thousand sixteen more than Y21
19 One thousand four hundred sixty-four less than Z15
20 X34 minus Z13
25 Twenty-six times a prime number
31 Y54 minus Y30
35 Mean of X22 and X41
40 Z4 minus Y42
45 A square
47 Half of X26, then subtract Y1

Solution: