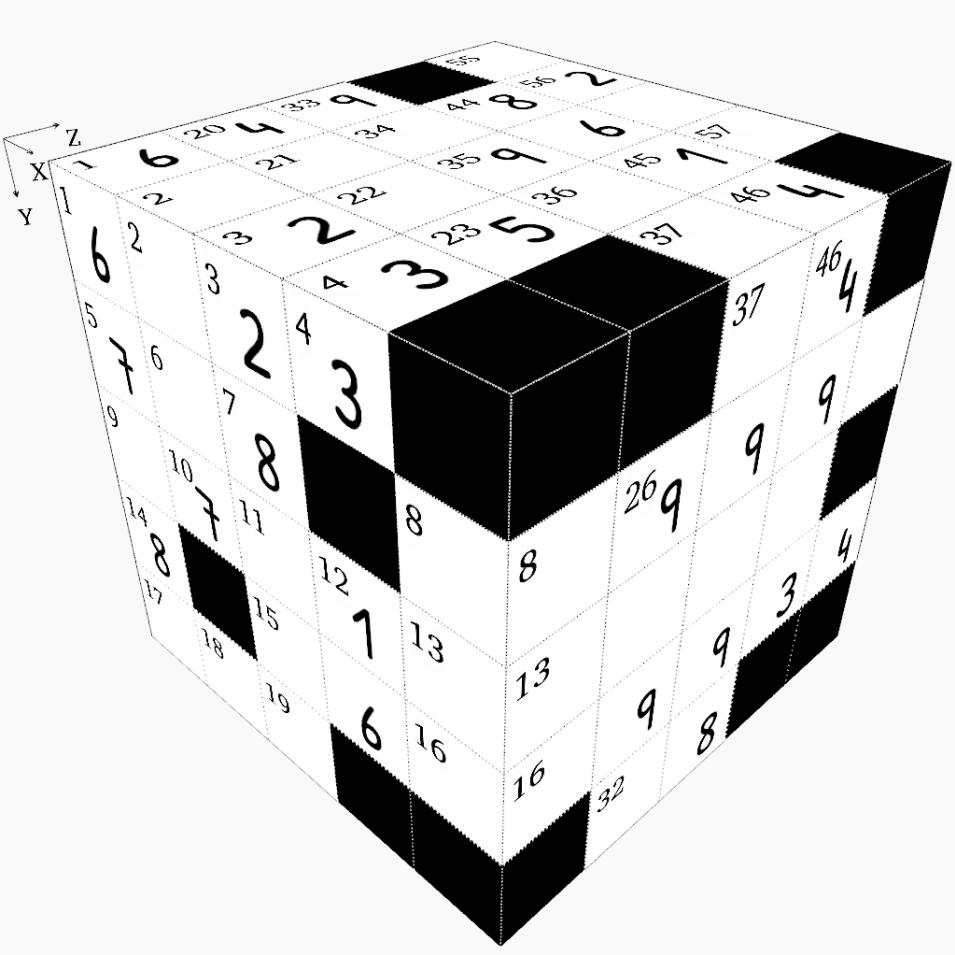
Difficulty: ☆☆☆☆☆

Cube - Beginner Puzzle #43

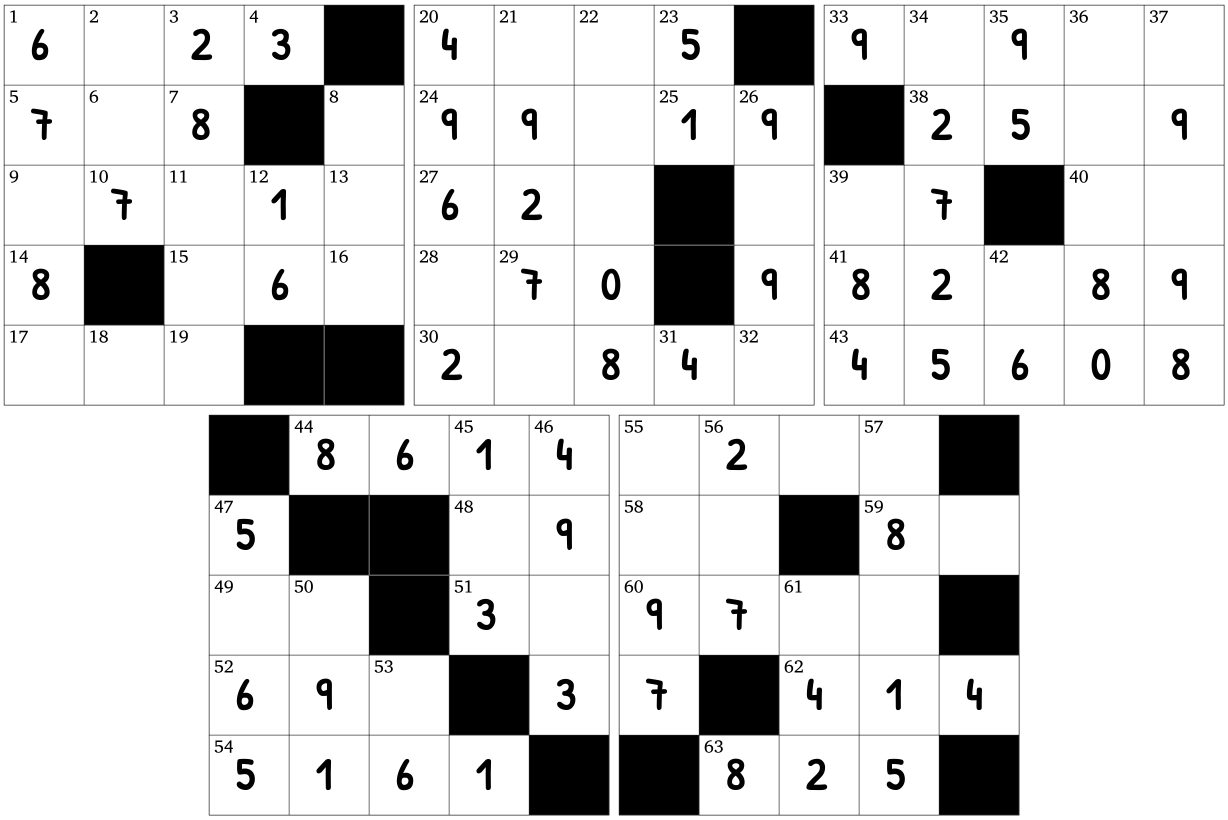


This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X,Y, and Z directions.

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

1 A prime number
5 Y2 reversed
9 Eight thousand two hundred ninety-eight less than Z4
15 X38 minus Z17
17 X51 plus Y56
20 Twenty-five times Y45
24 Twenty thousand eight hundred fifty-seven more than Z19
27 Thirty-one times Z11
28 Ten times a prime number
30 Six hundred thirty-two more than X9
33 Twice a prime number
38 Thirteen times a prime number
39 Z15 divided by X55
40 Three-fifths of Z11
41 Nine times a prime number
43 Eight times a prime number
44 One thousand seven hundred ninety-one more than X1
48 Y35 minus Y12
49 Same as X40
51 Y53 minus Y12
52 Rearranged digits of Z1
54 Thirteen times a prime number
55 Twenty-two times Z47
58 Its digits total X49
59 Y8 minus Z7
60 Four times a prime number
62 Nine times Y53
63 Z29 plus Y42

Y Direction

1 Twice a prime number
2 X5 reversed
3 Ninety-seven times Y50
8 Z25 minus Z40
12 A square
20 Last two digits are the same as last two digits of Z6
21 Last two digits are the same as last two digits of Y2
22 Forty-eight times a prime number
23 Y35 minus Z37
26 X60 minus Z32
34 Two thousand two hundred eighty-three less than Y22
35 Mean of Z47 and Z40
36 X38 times Z11
37 Mean of Z18 and Z25
39 Four times Y53
42 X48 plus X39
45 Mean of Z5 and Y56
46 A prime number
47 Five times a prime number
50 Three times a prime number
53 X58 minus Z11
55 A prime number
56 Three times X59
57 Five times a prime number
61 Rearranged digits of X15

Z Direction

1 Mean of X58 and X55
2 Twice a prime number
3 A prime number
4 Seven thousand two hundred eighty-five more than Y3
5 Same as X48
6 X17 reversed
7 X63 plus X51
8 All digits are the same
9 A prime number
10 A prime number
11 Two-thirds of X51
13 Seventy times X58
14 A prime number
15 Five thousand one hundred seventy-five less than Z9
16 Twice a prime number
17 Five times a prime number
18 Six times a prime number
19 Z2 minus Z13
25 Twenty-two times a square
29 A square
31 Fifty-five times a prime number
32 Z47 plus X49
37 Z6 divided by eighteen
40 Z32 plus X58
47 Half of X52, then subtract Y50

Solution: