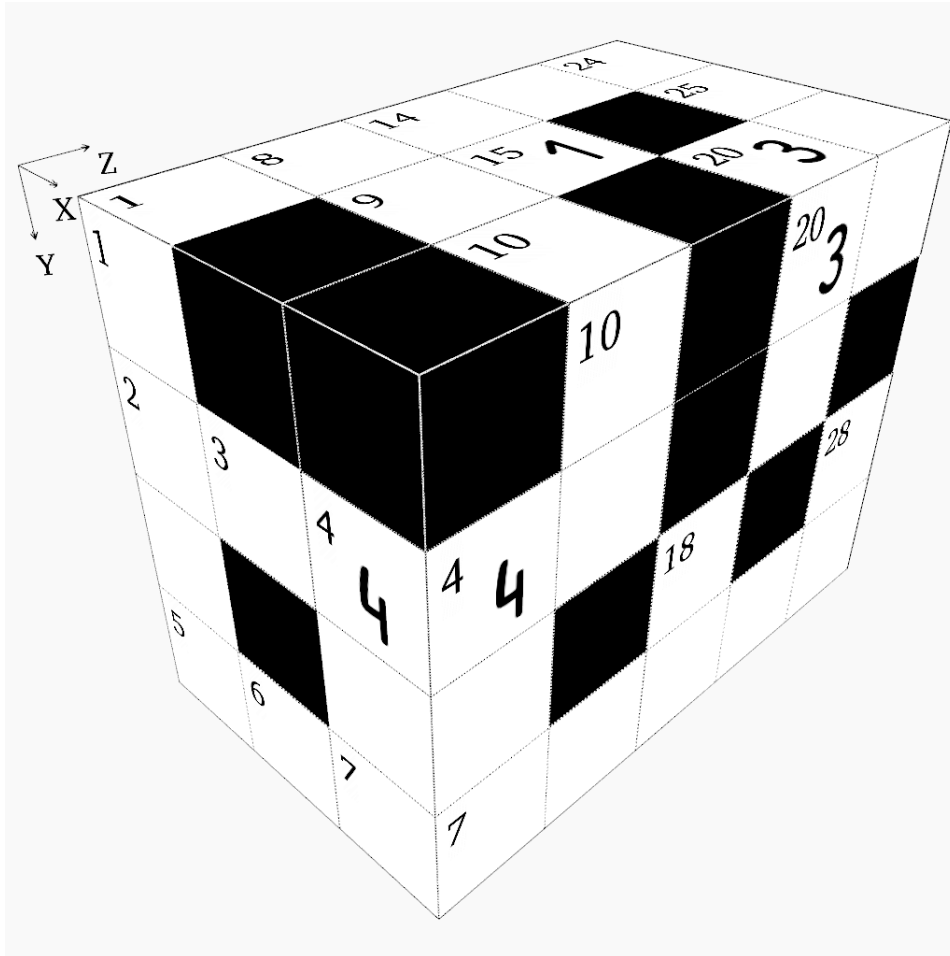


Difficulty: ★★★★★

## Box - Beginner Puzzle #41



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:

|   |   |   |    |    |    |    |    |    |  |    |    |    |    |
|---|---|---|----|----|----|----|----|----|--|----|----|----|----|
| 1 |   |   | 8  | 9  | 10 | 14 | 15 |    |  | 20 | 24 | 25 |    |
| 2 | 3 | 4 | 11 |    |    | 16 |    |    |  | 21 | 26 |    |    |
|   |   |   |    | 12 |    | 17 |    | 18 |  |    |    | 27 | 28 |
| 5 | 6 | 7 | 13 |    |    | 19 |    |    |  | 23 |    |    |    |

### X Direction

- 2 Y4 minus Z2
- 5 Y15 minus X19
- 8 Three-fourths of X24
- 11 X17 minus X22
- 13 Sixty-nine times Z9
- 14 Z9 plus X21
- 16 A square
- 17 X11 plus Y28
- 19 X17 minus X22
- 21 X27 minus Z17
- 22 Z17 minus Z4
- 23 Consecutive digits unordered
- 24 Mean of X13 and Y10
- 26 Z9 plus X16
- 27 Y18 reversed

### Y Direction

- 1 A prime number
- 4 X23 minus Y8
- 8 Mean of Y22 and Z4
- 9 Sixty-five times Y22
- 10 X23 divided by six
- 14 Eleven times a prime number
- 15 X5 plus X11
- 18 Z4 minus X21
- 20 Half of Z1, then subtract Z3
- 21 Y25 minus half of X27
- 22 X26 minus half of Y24
- 24 X17 divided by eighteen
- 25 Rearranged digits of X17
- 28 Sum of digits in Y1

### Z Direction

- 1 First two digits are the same as first two digits of X23
- 2 Mean of Y4 and Z4
- 3 A prime number
- 4 A square
- 5 Second, and third digits are the same
- 6 Y21 times Z9
- 7 A prime number
- 9 X17 divided by Z17
- 12 A prime number
- 17 Y22 plus X26
- 20 Mean of X14 and Y8

## Solution:

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 |   |   | 3 | 1 | 8 | 3 | 1 |   | 1 |   | 3 | 4 | 2 | 4 |
| 2 | 2 | 4 | 7 | 6 | 9 | 3 | 6 |   |   | 2 | 0 | 4 | 7 |   |
| 7 |   | 9 |   | 2 |   | 7 | 9 | 2 | 2 | 3 |   |   | 9 | 2 |
| 9 | 2 | 7 | 7 | 5 | 9 | 7 | 6 | 9 | 5 | 3 | 4 |   |   | 3 |