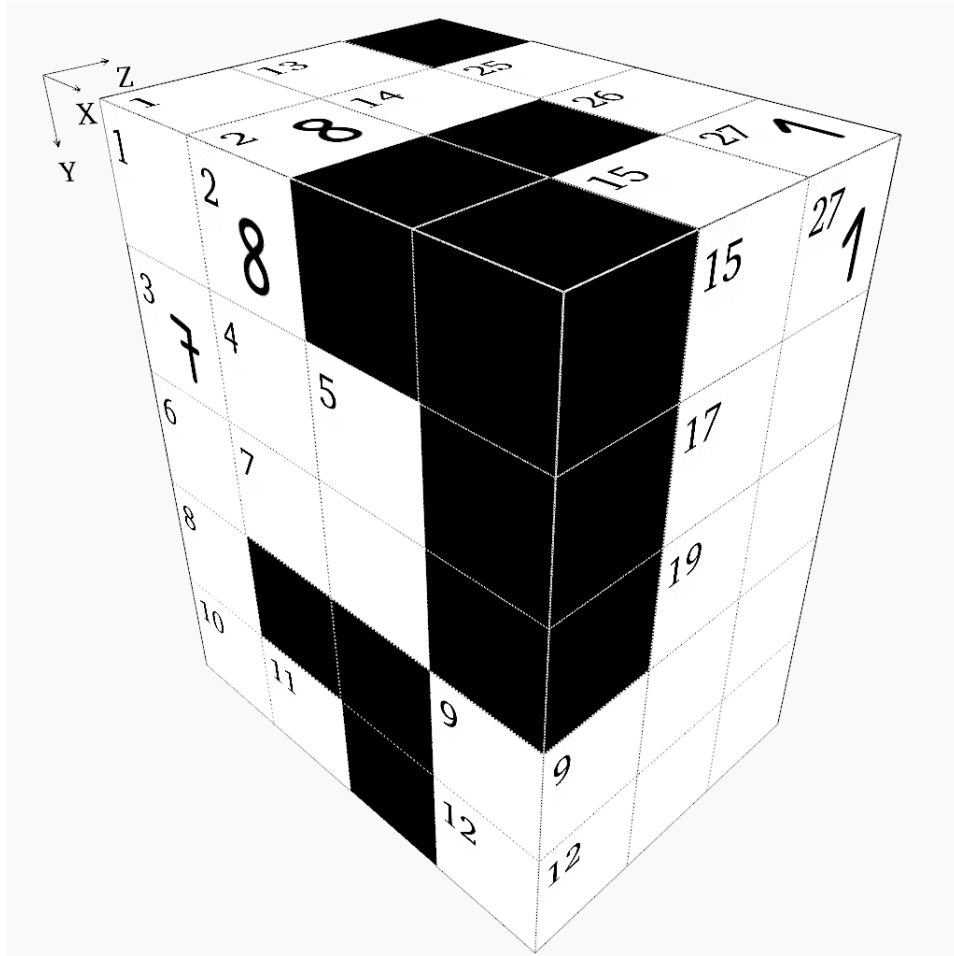


Difficulty: ☆☆☆☆☆

## Box - Beginner Puzzle #48



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             | 2<br><b>8</b> |   |    | 13 | 14             |                | 15 |    | 25 | 26       | 27<br><b>1</b> |
| 3<br><b>7</b> | 4             | 5 |    |    | 16<br><b>6</b> | <b>9</b>       | 17 | 28 |    | <b>0</b> |                |
| 6             | 7             |   |    | 18 | <b>4</b>       |                | 19 |    |    |          |                |
| 8             |               |   | 9  | 20 | 21             | 22             |    | 29 | 30 | 31       |                |
| 10            | 11            |   | 12 | 23 |                | 24<br><b>8</b> |    |    | 32 |          |                |

#### X Direction

- 1 Y25 plus X10
- 3 Eighteen times a prime number
- 6 Z5 minus Z6
- 10 Half of Y2, then subtract Z11
- 13 Z22 reversed
- 16 Seventeen times a prime number
- 18 Z1 minus Y9
- 20 A palindrome
- 23 X29 minus half of Z9
- 25 X13 plus half of X1
- 28 Six times a prime number
- 29 Four times a prime number
- 32 Five times a prime number

#### Y Direction

- 1 Nine thousand sixty-one less than Y14
- 2 Eleven times Z17
- 5 X18 plus Z7
- 9 Y27 divided by Z4
- 14 Twelve times a prime number
- 18 Mean of Y26 and Z6
- 22 Mean of Y28 and Y26
- 25 Y31 minus Z22
- 26 Y9 minus Y25
- 27 Seventy-three times a square
- 28 Same as Z8
- 30 Y28 minus Z15
- 31 Y26 plus Z7

#### Z Direction

- 1 Mean of X13 and Z15
- 2 Thirteen times a prime number
- 4 Same as Z11
- 5 Z9 plus X6
- 6 Same as Z9
- 7 A square
- 8 Z15 plus Y30
- 9 Twice a prime number
- 10 Mean of Y25 and X13
- 11 Y27 divided by Y9
- 12 X32 minus Y26
- 15 X3 minus X16
- 17 Mean of Z24 and X1
- 19 Z8 minus half of Z7
- 21 Mean of X1 and Y5
- 22 Y28 minus half of Y31
- 24 Two-thirds of Z8

## Solution:

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