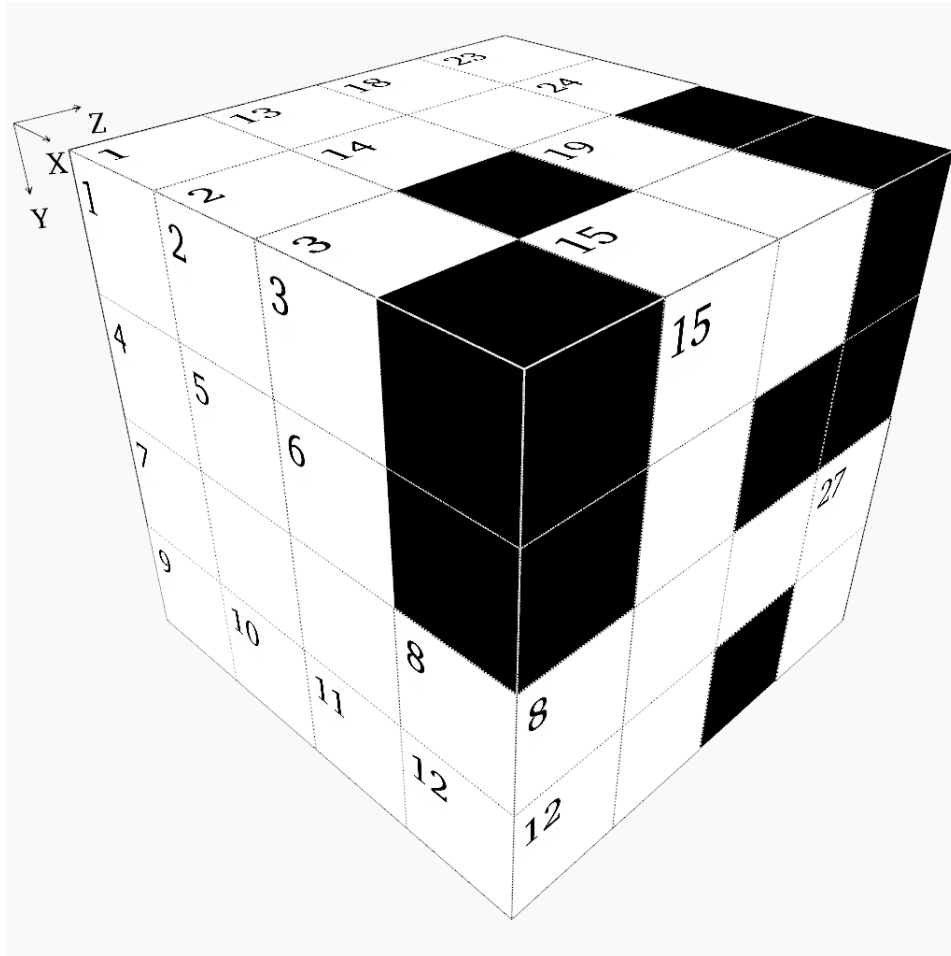


Difficulty: ★★☆☆☆

## Cube - Challenging Puzzle #5



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:

|   |    |    |    |    |    |  |    |    |    |    |  |    |    |  |    |
|---|----|----|----|----|----|--|----|----|----|----|--|----|----|--|----|
| 1 | 2  | 3  |    | 13 | 14 |  | 15 | 18 |    | 19 |  | 23 | 24 |  |    |
| 4 | 5  | 6  |    | 16 |    |  |    |    |    |    |  | 25 |    |  |    |
| 7 |    |    | 8  |    |    |  |    | 20 | 21 |    |  | 26 |    |  | 27 |
| 9 | 10 | 11 | 12 | 17 |    |  |    | 22 |    |    |  | 28 |    |  |    |

### X Direction

- 1 Z1 divided by Y14
- 4 A prime number
- 7 Consecutive digits unordered
- 9 Z8 plus half of Y1
- 13 Mean of Y27 and X22
- 16 Five times a prime number
- 17 A prime number
- 18 Twice the result of Z10 minus Z21
- 20 Seventy-seven times a prime number
- 22 Z5 minus Z11
- 23 Z12 plus X13
- 25 Four times a prime number
- 26 X18 divided by fifty-eight
- 28 Mean of Y14 and X9

### Y Direction

- 1 Eighty-four times a prime number
- 2 Mean of Z6 and X25
- 3 A prime number
- 8 A prime number
- 13 Eight times a prime number
- 14 Z5 minus X22
- 15 Y3 minus half of Y19
- 18 Eight hundred seven less than X7
- 19 Four times X22
- 21 X13 minus Z12
- 23 A prime number
- 24 Seventy times a prime number
- 27 Z7 minus X28

### Z Direction

- 1 Z11 times X1
- 2 Y27 times X13
- 4 Mean of X17 and X16
- 5 A square
- 6 One thousand nine hundred fifty-seven less than Y23
- 7 Eighteen times a prime number
- 8 Fifty-five times a prime number
- 9 One thousand three hundred seventy-eight more than Z8
- 10 Twenty times X22
- 11 Same as Y14
- 12 Y24 divided by X22
- 15 Six times a square
- 21 Mean of Y8 and Z12

## Solution:

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