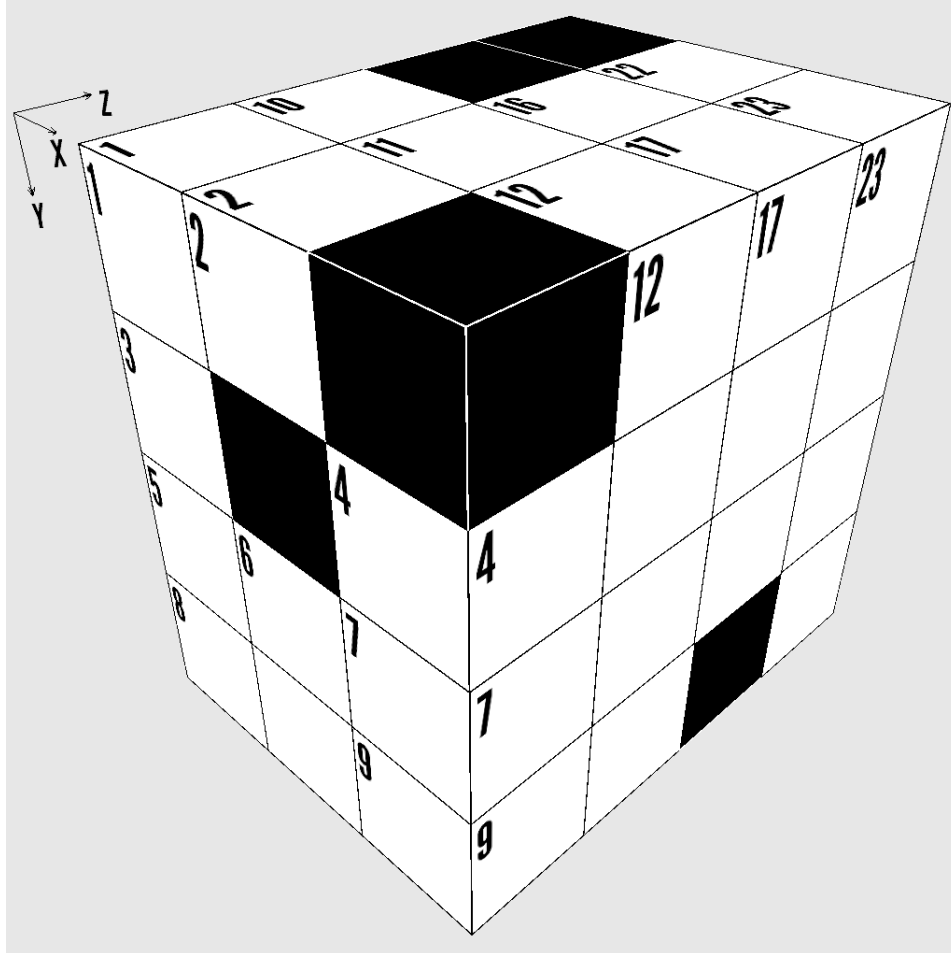


Difficulty: ★★☆☆☆

## 3D Math Puzzle - 3x4x4 Box 28



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" read from:
  - a. X Direction: Left to right
  - b. Y Direction: Top to bottom
  - c. Z Direction: Front to back
3. There is one unique solution which satisfies all the clues given below.
4. 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 |   | 10 | 11 | 12 |    | 16 | 17 |    | 22 | 23 |
| 3 |   | 4 | 13 | 14 |    | 18 |    |    | 24 |    |    |
| 5 | 6 | 7 | 15 |    |    | 19 |    |    | 25 | 26 |    |
| 8 |   | 9 |    |    |    | 20 | 21 |    | 27 |    |    |

**Clues:**

**X Direction**

- 1 Digits are the same as first two digits of Z4
- 5 Eleven times a prime number
- 8 First two digits are the same as first two digits of X25
- 10 Last two digits are the same as last two digits of Z2
- 13 Y17 minus Z21
- 15 Y18 minus X1
- 16 Four times a prime number
- 18 Last two digits are the same as last two digits of Z3
- 19 Six times a prime number
- 20 X8 minus X18
- 22 All digits are the same
- 25 Digits are the same as first three digits of Y1
- 27 Last two digits are the same as Z14

**Y Direction**

- 1 First two digits are the same as first two digits of X8
- 4 First two digits are the same as Z1
- 6 Digits are in consecutive order
- 10 First two digits are the same as first two digits of Z7
- 11 First two digits are the same as Y26
- 12 Twenty-nine times a prime number
- 16 Four times a prime number
- 17 Twice a prime number
- 18 Forty-three times Y6
- 23 Forty-five times a prime number
- 24 Is a prime number
- 26 Digits are the same as first two digits of Z3

**Z Direction**

- 1 Z14 minus Y6
- 2 Twenty-three times a prime number
- 3 First two digits are the same as first two digits of Y11
- 4 Is a prime number
- 5 Last two digits are the same as last two digits of Y18
- 6 Seventy-eight times a prime number
- 7 Is a prime number
- 8 First two digits are the same as first two digits of X8
- 9 Is a prime number
- 12 Is a prime number
- 14 Z21 minus Y6
- 21 Digits are in consecutive descending order

**Solution is on next page**

Solution:

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