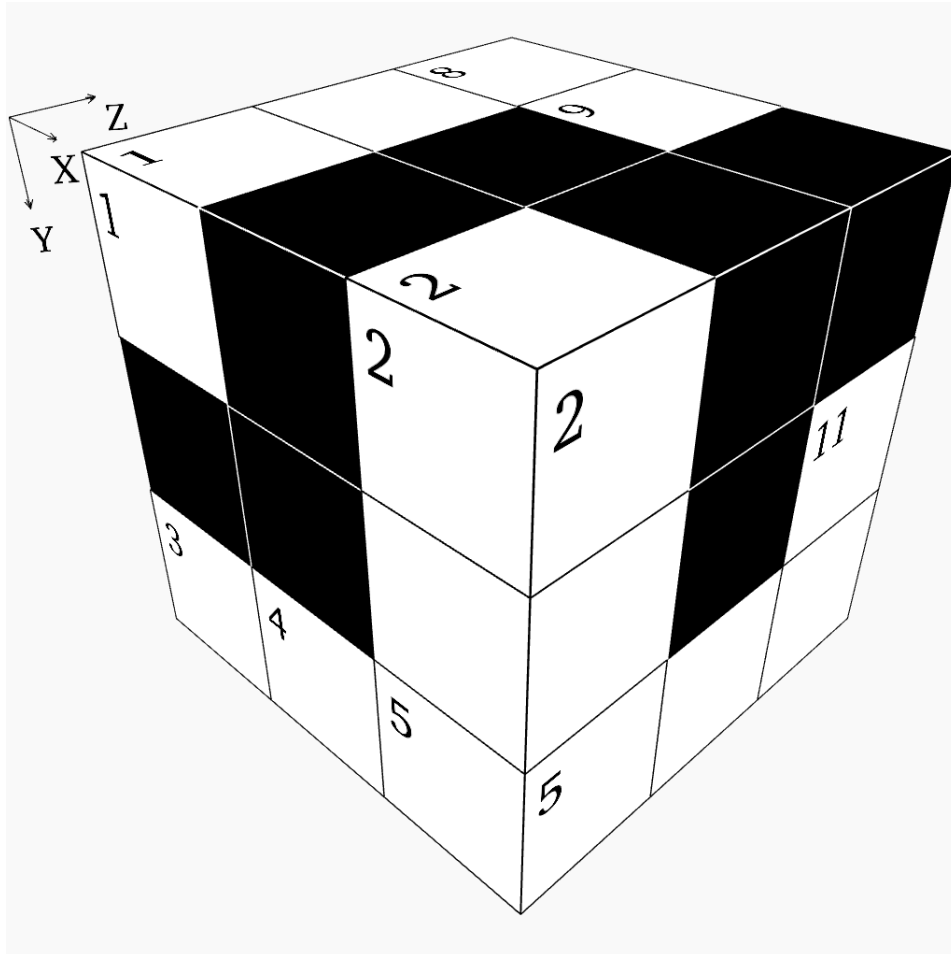


Cube - Intermediate Puzzle #29



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 | | | | 8 | 9 | |
| | | | | | 6 | | | 11 |
| 3 | 4 | 5 | 7 | | | | 12 | |

X Direction

- 3 Z4 minus X8
- 7 Z3 plus Y11
- 8 Same as Y8
- 10 Half of Z1, then subtract X8
- 12 Four times a prime number

Y Direction

- 2 Twice Y9
- 6 Same as Z6
- 8 X7 minus Y11
- 9 Z6 plus half of X12
- 11 X7 minus X8

Z Direction

- 1 Eleven times a square
- 3 Half of X3, then subtract Y2
- 4 Z5 minus Z6
- 5 Z4 plus Y6
- 6 Three times a prime number

Solution:

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