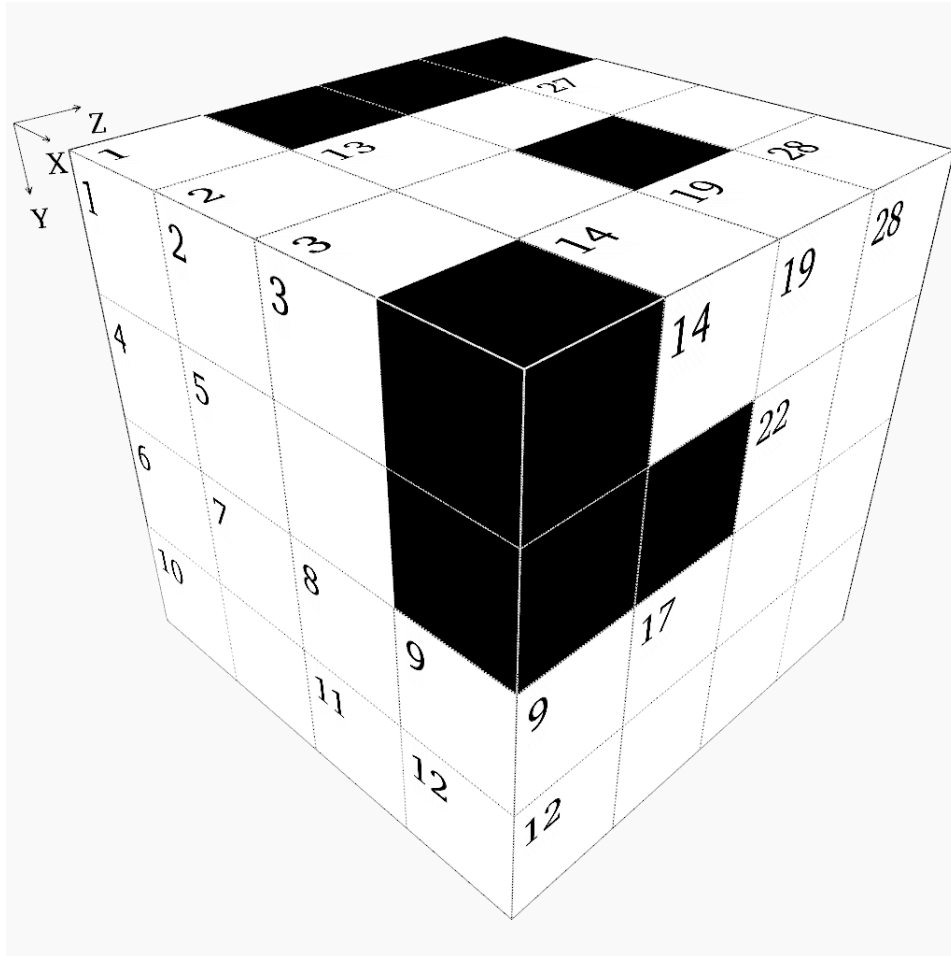


Difficulty: ★★☆☆☆

Cube - Challenging Puzzle #22



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			19		27		28
4	5							20		21	22			
6	7	8	9	15		16	17	23	24			29		
10		11	12			18		25	26			30		

X Direction

- 1** Mean of Y20 and Z26
- 4** Consecutive digits in ascending order
- 6** Three times Y13
- 10** Twice the result of X6 plus Z14
- 13** Y20 minus Z3
- 15** Fifty-six times a prime number
- 18** Mean of Z22 and Z26
- 21** Mean of Z26 and Z22
- 23** A prime number
- 25** Eight hundred seventy-four less than X23
- 27** Its digits total X29
- 29** A square
- 30** Twice a prime number

Y Direction

- 1** X15 minus Z6
- 2** Twice a prime number
- 3** X15 plus Y19
- 9** Mean of Z22 and Y24
- 13** X10 divided by nine
- 15** Z11 divided by Y17
- 16** Two-thirds of X18
- 17** Y24 minus Z5
- 19** Half of Z7, then subtract Y13
- 20** A prime number
- 21** Twenty-eight times a prime number
- 24** Mean of Y9 and Z3
- 27** Eighty-five times a square
- 28** Seventy-six times a prime number

Z Direction

- 2** Z8 plus Y21
- 3** X4 minus half of Y15
- 5** X15 minus X10
- 6** Twenty-three times Y17
- 7** Eighty-six times a prime number
- 8** Nine times Y9
- 9** Five times a prime number
- 10** Y28 minus Y3
- 11** Y17 times Y16
- 12** Twenty-four times a prime number
- 14** Three times a prime number
- 22** Z26 minus X29
- 26** Mean of X4 and Y17

Solution:

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