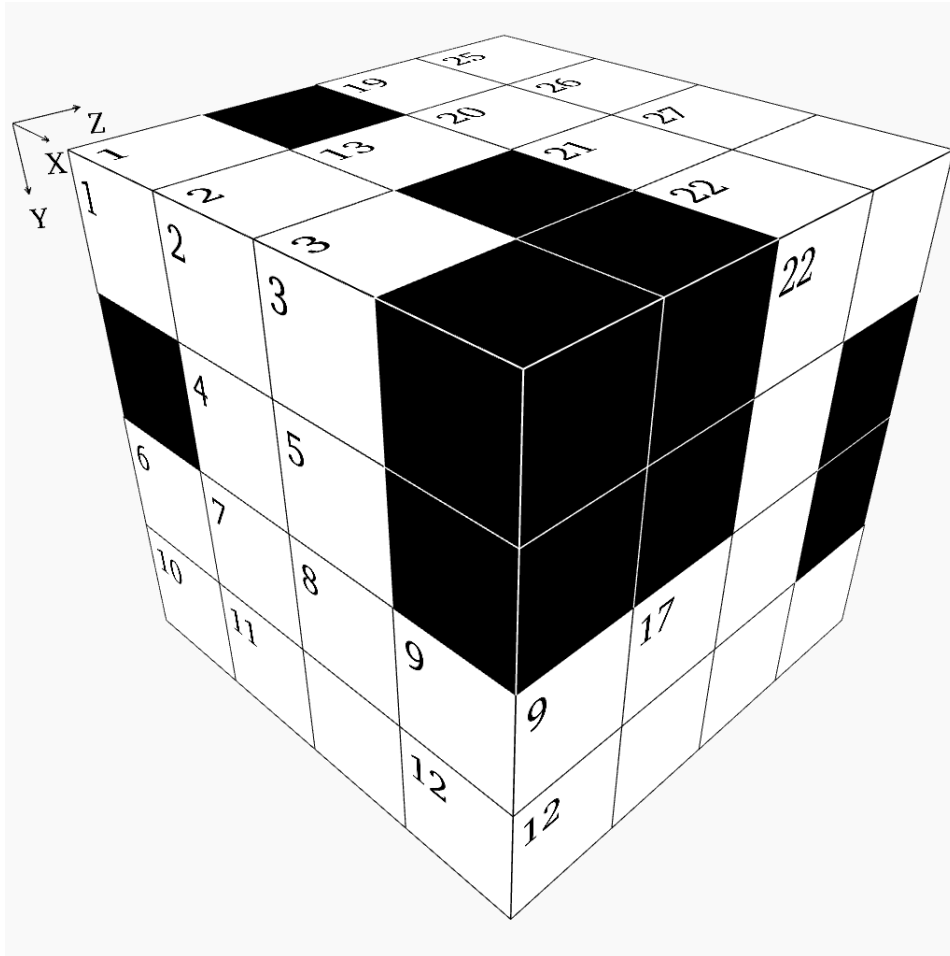


Difficulty: ★★☆☆☆

Cube - Challenging Puzzle #23



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			19	20	21	22	25	26	27	
	4	5		14		15		23				28			
6	7	8	9	16			17		24				29		
10	11		12	18								30			

X Direction

- 1 Twenty-six times a prime number
- 4 A cube
- 6 Z2 minus half of Y21
- 10 Rearranged digits of Z11
- 14 Its digits total X30
- 16 Thirteen times a prime number
- 18 Y9 minus Y17
- 19 Mean of X16 and Y15
- 23 Twice a prime number
- 24 Twice a prime number
- 25 Mean of Z4 and X16
- 28 Z10 plus X14
- 29 X10 minus Y26
- 30 A square

Y Direction

- 2 Fourteen times a prime number
- 3 Seventy times Z10
- 6 X29 plus Z19
- 9 Mean of Y6 and Z6
- 13 X18 plus Y3
- 14 Three times Y6
- 15 Z19 plus X30
- 17 Z22 minus X29
- 19 A prime number
- 20 Z4 minus Z10
- 21 Twice a prime number
- 22 One hundred forty-one less than X10
- 25 Mean of Y15 and Z19
- 26 A palindrome
- 27 X1 minus Y25

Z Direction

- 2 Six times a prime number
- 4 Z22 plus Y20
- 5 One thousand one hundred forty-eight more than Y22
- 6 X29 plus Y19
- 7 X25 minus half of Y22
- 8 Sixty-nine times a prime number
- 9 Four times a prime number
- 10 Same as Z22
- 11 Sixty-two times Z6
- 12 X23 minus Y19
- 14 Twenty-one times a prime number
- 19 Z6 minus Y25
- 21 X29 minus Y17
- 22 X28 minus X14

Solution:

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