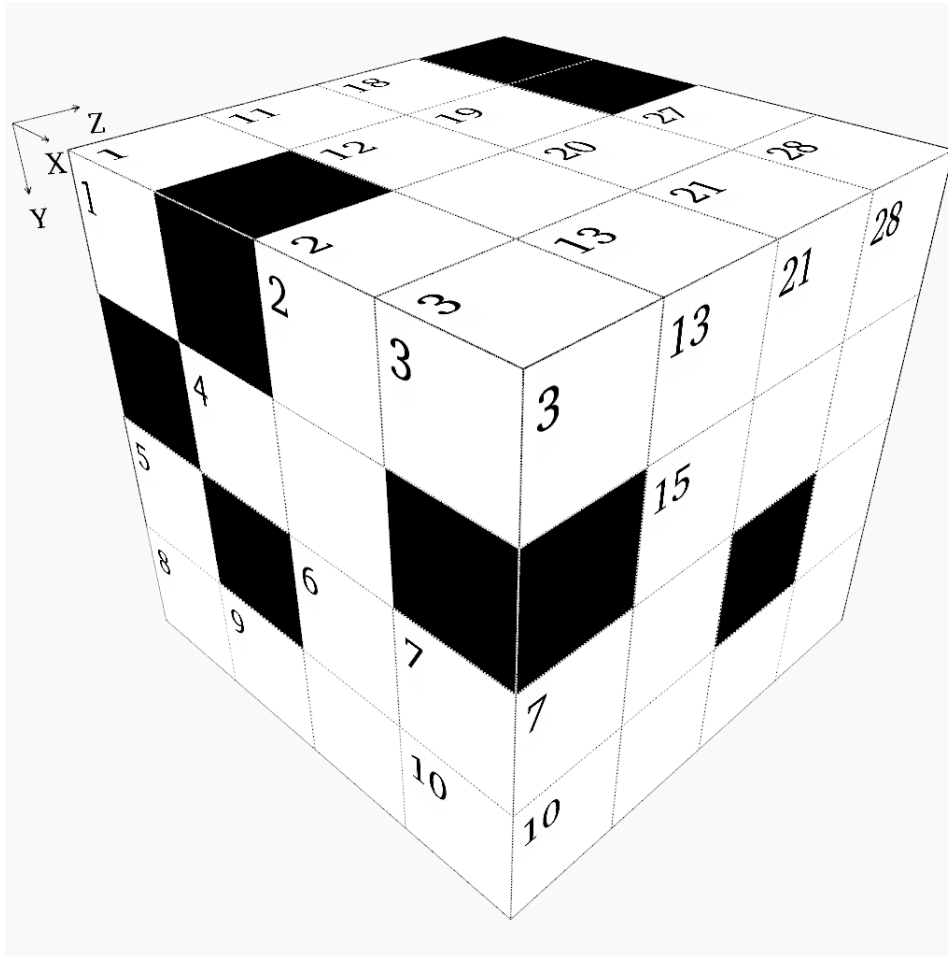


Difficulty: ★★☆☆☆

Cube - Challenging Puzzle #24



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	11	12		13	18	19	20	21			27	28
	4			14			15	22		23		29	30		
5		6	7			16		24	25				31		
8	9		10	17				26							

X Direction

- 2 Same as Y20
- 4 A prime number
- 6 Y5 minus X17
- 8 Six hundred fifty-five more than Z4
- 11 Z9 minus Z7
- 14 Y18 divided by fifty-six
- 16 Y21 minus X6
- 17 A cube
- 18 Mean of Z3 and Y5
- 22 Z9 minus X24
- 24 Mean of Y21 and Y7
- 26 Mean of Z4 and X4
- 27 Mean of X14 and Z25
- 29 A prime number
- 31 Twice the result of Z14 minus Y27

Y Direction

- 2 Mean of X31 and Y19
- 5 X26 divided by sixty-two
- 7 Same as X16
- 11 Y30 plus Z2
- 12 Z15 minus Z12
- 13 Twenty-two times a prime number
- 18 Fifty-six times Y12
- 19 Sixteen times a prime number
- 20 X31 divided by fourteen
- 21 A square
- 27 One hundred forty-two less than Y30
- 28 A prime number
- 30 A prime number

Z Direction

- 1 A palindrome
- 2 Mean of Y2 and Z23
- 3 A prime number
- 4 A prime number
- 5 Twenty-eight times a prime number
- 6 X31 divided by six
- 7 Same as X16
- 8 Z6 times X16
- 9 Y7 plus X11
- 10 Mean of Y19 and Y11
- 12 Z15 minus X14
- 14 Nine times a prime number
- 15 Mean of X31 and X6
- 23 Four times Z7
- 25 Mean of X6 and Y7

Solution:

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