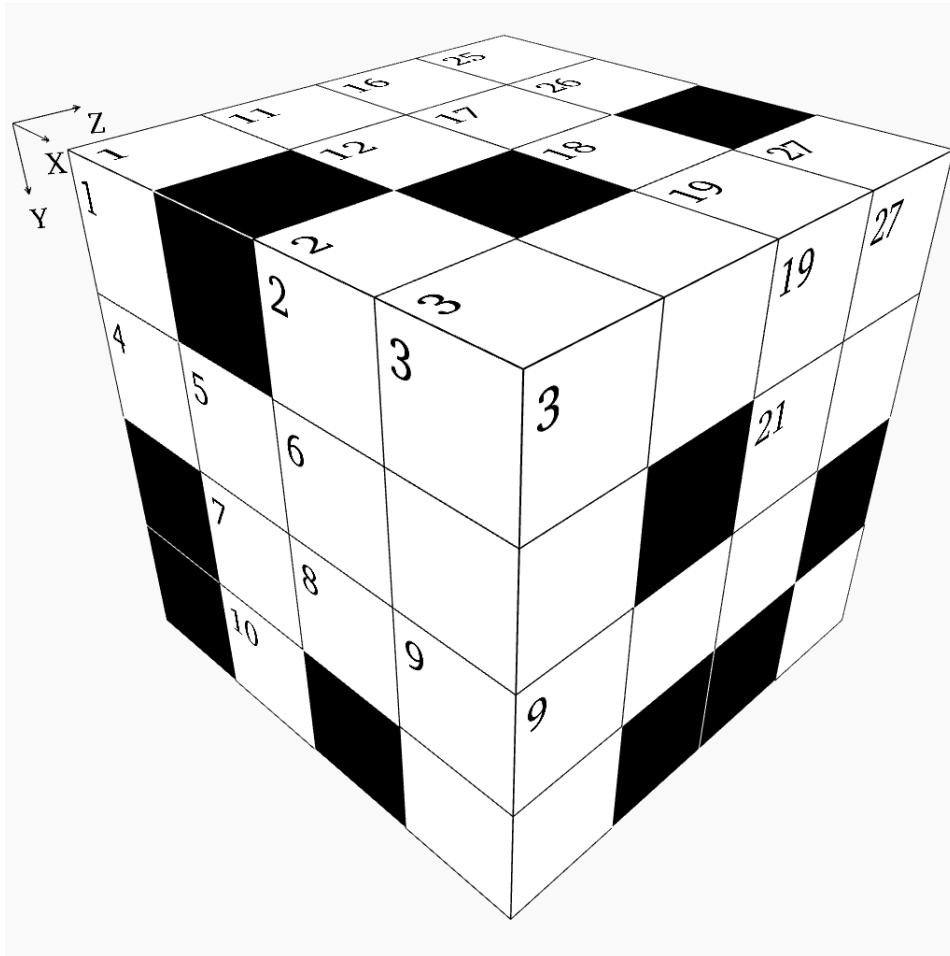


Difficulty: ★★☆☆☆

Cube - Challenging Puzzle #11



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

X Direction

- 2 X11 reversed
- 4 Z24 plus Z6
- 7 A prime number
- 11 Mean of X25 and Y11
- 13 Three times a prime number
- 15 Four times a prime number
- 16 Eight hundred nineteen less than Y3
- 20 X16 minus Z10
- 22 Y29 plus Z9
- 23 Y29 minus X25
- 25 Same as Y14
- 28 Nineteen times a prime number
- 30 Twice a prime number
- 31 Three hundred seventy-seven less than Z10

Y Direction

- 1 Consecutive digits in descending order
- 2 Twice the result of X23 plus Y1
- 3 A prime number
- 5 Y19 minus Y11
- 11 X2 minus Z24
- 12 Last two digits are the same as last two digits of X30
- 14 Y29 minus X23
- 16 Z24 plus Z21
- 17 Eighteen times a prime number
- 18 A prime number
- 19 Rearranged digits of X22
- 25 Mean of Z5 and Z7
- 26 A prime number
- 27 Z3 divided by Y14
- 29 Mean of Y16 and Z12

Z Direction

- 1 A prime number
- 3 X25 times Y27
- 4 Twelve times X30
- 5 Twenty-eight times a prime number
- 6 Forty-six times a prime number
- 7 Thirty-seven times a square
- 8 Fourteen times a prime number
- 9 A square
- 10 Twenty-one times a prime number
- 12 A prime number
- 21 Three times a prime number
- 23 Two-thirds of Z21
- 24 Y29 divided by forty-six

Solution:

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