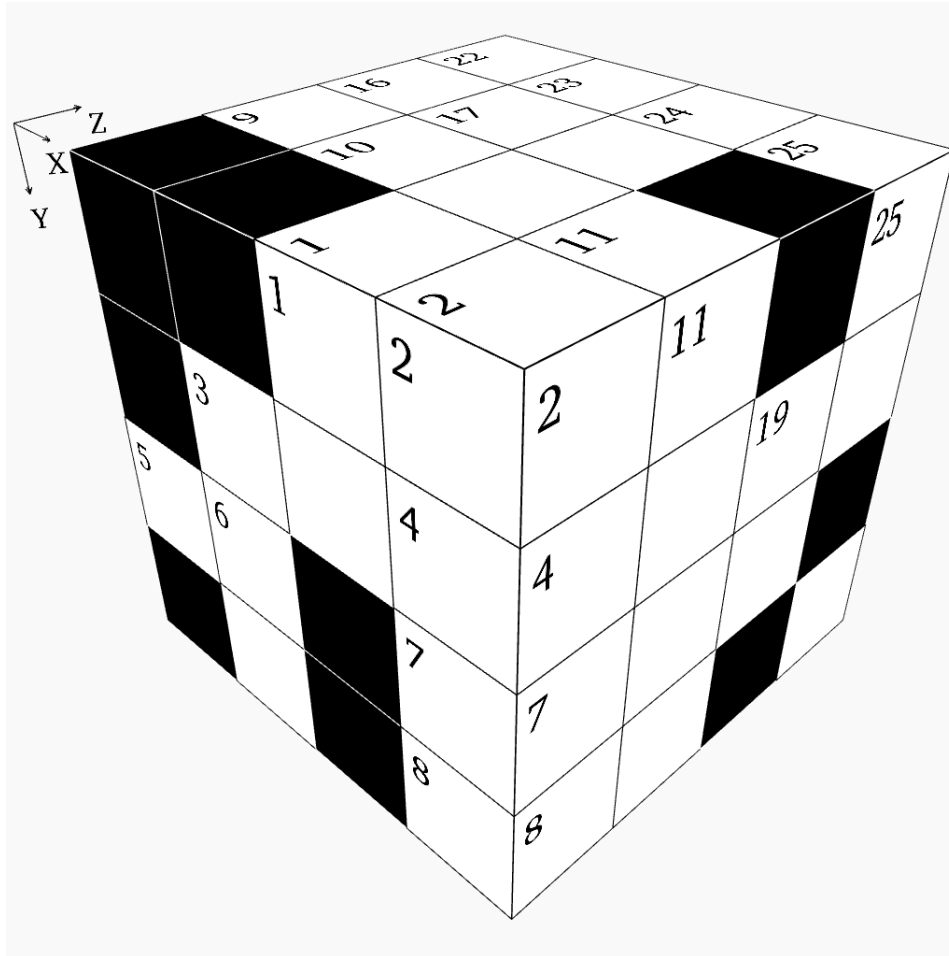


Cube - Challenging Puzzle #31



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	9	10		11	16	17			22	23	24	25
	3		4	12				18			19	26			
5	6		7	13		14		20				27			
			8			15			21			28			

X Direction

- 1 X16 minus X15
- 3 X20 plus Z12
- 5 A square
- 9 X13 minus Z2
- 12 Y19 minus X1
- 13 Three hundred twenty-four less than Y2
- 15 Digits are the same as last two digits of Y11
- 16 Y17 divided by fourteen
- 18 X26 divided by sixty-seven
- 20 A square
- 21 Mean of Z8 and Y19
- 22 Fifty-four times a prime number
- 26 Fifteen times a prime number
- 27 Twice the result of X3 plus X21
- 28 Mean of Y22 and Y2

Y Direction

- 1 X21 minus X20
- 2 Four hundred twenty-three more than X9
- 3 Y11 minus X13
- 9 Thirteen times a prime number
- 10 Eight times a prime number
- 11 Five hundred twenty-six more than Z6
- 14 X16 minus Y1
- 16 Twice the result of X26 minus Y9
- 17 Z8 plus half of Y23
- 19 Z2 minus X20
- 22 One thousand nine hundred ninety-one less than X9
- 23 Eight times a prime number
- 24 Forty times a prime number
- 25 Mean of X15 and Y14

Z Direction

- 1 A prime number
- 2 Mean of Z10 and Y25
- 3 First two digits are the same as X12
- 4 Twenty-five times a prime number
- 5 Ninety-three times a prime number
- 6 Sixty-seven more than X9
- 7 Z2 plus Y25
- 8 X12 minus Y1
- 9 X26 minus Y14
- 10 Mean of Y10 and Y19
- 12 X22 divided by eighteen
- 15 Half of X22, then subtract Z1
- 21 Z15 divided by twenty

Solution:

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