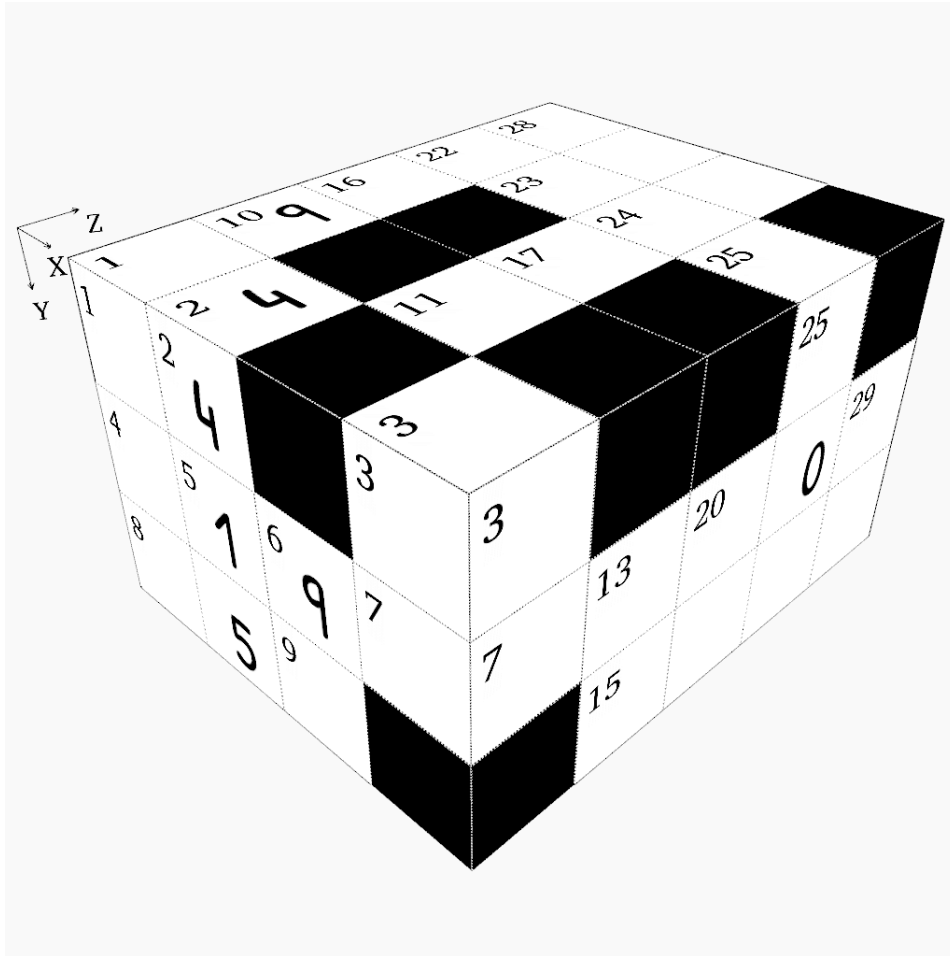


Difficulty: ☆☆☆☆☆

Box - Beginner Puzzle #45



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 box pictured above and divide it into individual X-Y layers, we will get these planes:

1	2		3	10		11		16		17	
	4			9							
4	5	6	7	12			13	18	19		20
	1	9						4	7		
8		9				14	15	21			
	5					5			2		
				22	23	24	25	28			
				26			0	2			29
						27					

X Direction

- 1 Y19 minus Y13
- 4 Rearranged digits of X22
- 8 Four times Y13
- 12 A prime number
- 14 Z7 divided by Y28
- 18 Mean of Z15 and Y24
- 21 X27 minus Y3
- 22 Five times a prime number
- 26 Six hundred forty-three less than X12
- 27 A prime number
- 28 A square

Y Direction

- 1 Twenty-seven times a prime number
- 2 Half of X28, then subtract Y3
- 3 Mean of Y23 and X14
- 6 Z9 plus X27
- 10 Mean of Y29 and Z5
- 11 Y25 minus Y23
- 13 Y17 plus Y23
- 16 Y1 plus Y6
- 17 X14 minus X21
- 19 Z5 divided by Y17
- 20 Y23 plus X27
- 22 Z8 minus half of Z23
- 23 Y19 divided by six
- 24 Four times a prime number
- 25 Mean of Y10 and X1
- 28 X28 plus Y17
- 29 Y22 minus Z23

Z Direction

- 1 A prime number
- 4 Twice a square
- 5 Thirteen times a square
- 6 Five times a prime number
- 7 Four thousand seven hundred seventy-four less than Z4
- 8 A prime number
- 9 A square
- 11 Last three digits are the same as last three digits of X26
- 15 Twice a square
- 23 Y3 minus Z9

Solution:

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