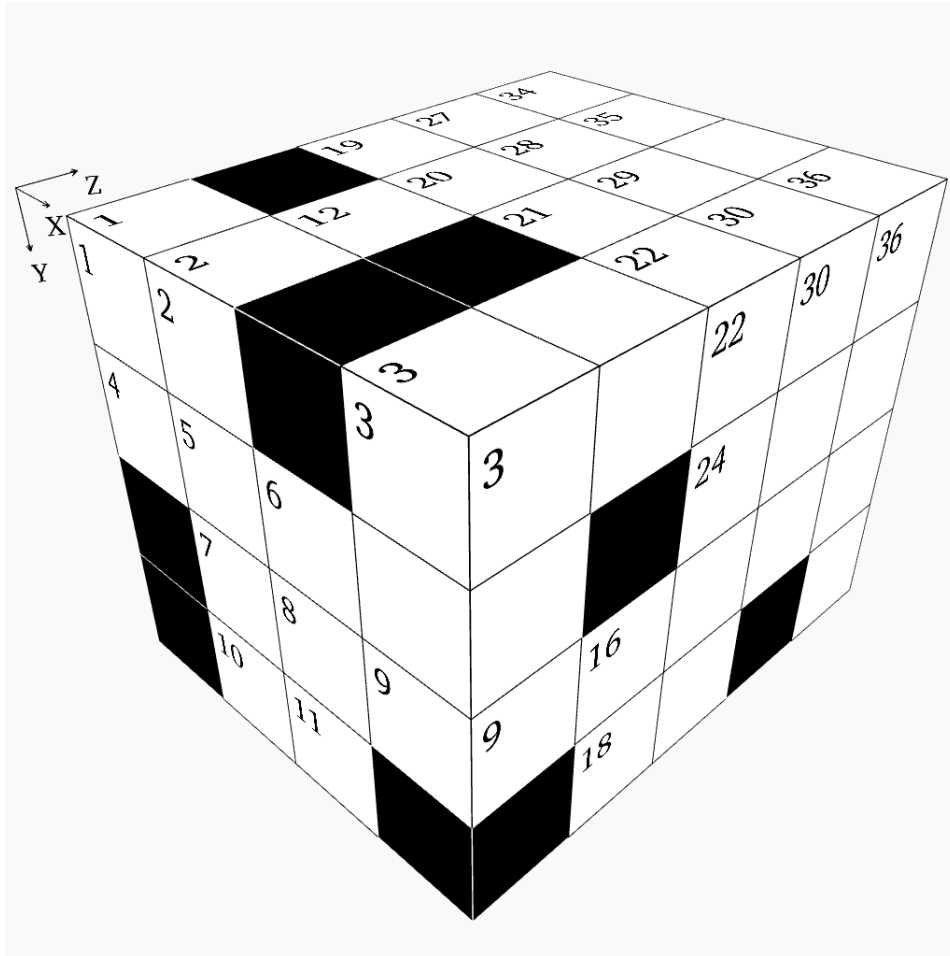


Box - Challenging Puzzle #7



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		12			19	20	21	22
4	5	6		13		14			23		24
	7	8	9	15			16	25			
	10	11		17			18	26			
				27	28	29	30	34	35		36
				31				37			
								38		39	
				32		33		40			

X Direction

- 1 Y13 minus X13
- 4 One thousand four hundred sixty-eight less than X31
- 7 Mean of X34 and Y29
- 10 Y21 divided by eleven
- 13 Mean of X23 and Y30
- 15 Forty-six times a prime number
- 17 Z31 times X37
- 19 X34 minus X1
- 23 Z19 plus half of Z24
- 25 Seventeen times a prime number
- 26 X13 minus Z33
- 27 Rearranged digits of X31
- 31 Twice a prime number
- 32 Half of X31, then subtract Y12
- 34 Mean of Y6 and Y12
- 37 X17 divided by X26
- 38 Twenty-four times a prime number
- 40 Half of X4, then subtract Z18

Y Direction

- 1 A cube
- 2 Consecutive digits unordered
- 3 Half of Y21
- 6 Six times Y39
- 12 Fifty-eight times X10
- 13 Z24 plus Y25
- 14 Mean of Y13 and Y30
- 16 Mean of Y28 and Z15
- 20 Twenty-one times a prime number
- 21 Twenty-two times a prime number
- 22 Twice the result of X38 plus Z8
- 25 Y30 minus X10
- 27 Y13 minus Y14
- 28 Half of Z3, then subtract Z9
- 29 Z24 minus Y39
- 30 A square
- 34 X34 plus Y27
- 35 Six times a prime number
- 36 Two hundred forty more than X40
- 39 Y28 minus Y25

Z Direction

- 2 Eight thousand seven hundred eighty-one more than Z5
- 3 Six times a prime number
- 4 Y6 minus Y30
- 5 First two digits are the same as Z15
- 6 Z7 plus Y6
- 7 Twelve times Y16
- 8 Thirty-four times X1
- 9 Four times a prime number
- 10 Sixteen thousand nine hundred less than Z2
- 11 Z33 minus Y39
- 15 Mean of Y29 and X10
- 17 Eight hundred eleven more than X31
- 18 A square
- 19 A square
- 21 Thirteen times a prime number
- 24 Y28 plus Y27
- 31 Z4 plus X1
- 33 Mean of Z15 and Y27

Solution:

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

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