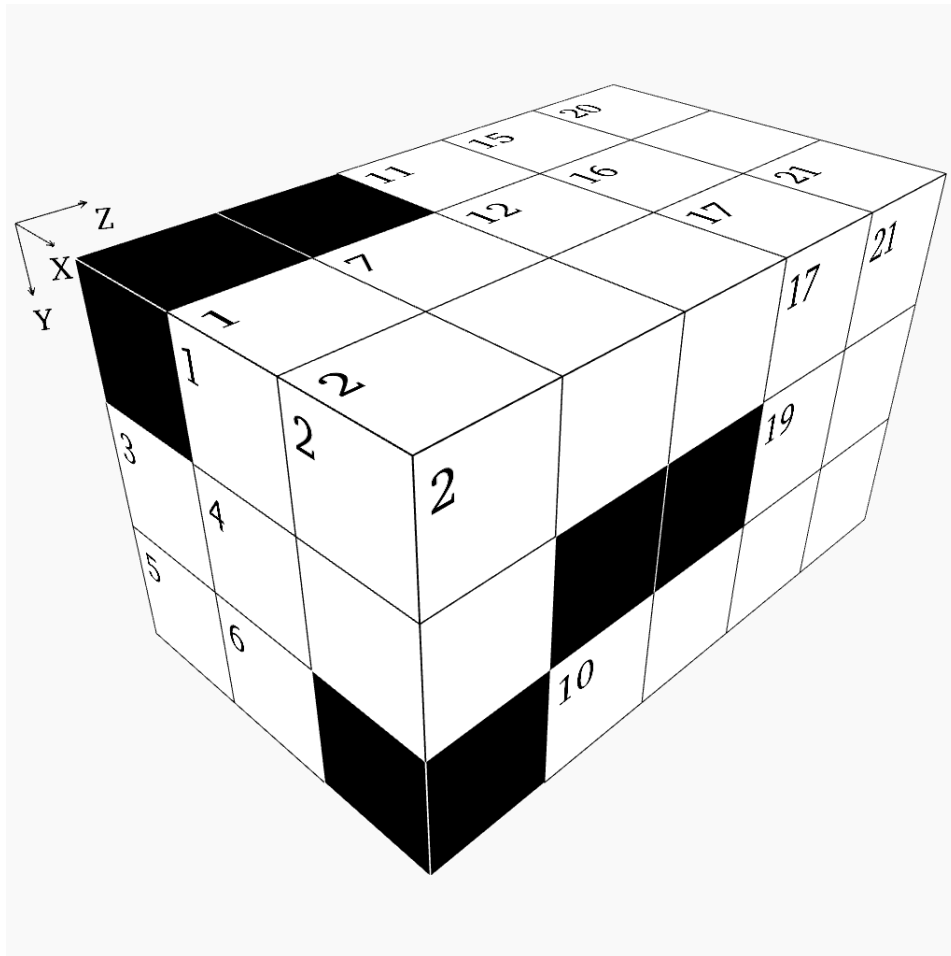


Box - Intermediate Puzzle #18



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	7	11	12	15	16	17	20	21
3	4	8	13	14	18	19		22	
5	6	9	10			16		20	

X Direction

- 1 Mean of Y2 and Y8
- 3 Ten times a prime number
- 5 Y1 divided by Y16
- 7 Twice a square
- 8 Half of Y11, then subtract X20
- 9 Mean of Y16 and Y21
- 11 Y11 minus X5
- 13 Y8 minus X5
- 14 A square
- 15 Z11 minus half of Y15
- 18 Thirty-nine times X22
- 20 Y15 minus X9
- 22 Y3 reversed

Y Direction

- 1 Rearranged digits of Y21
- 2 X7 minus Y3
- 3 X22 reversed
- 7 Ten times a prime number
- 8 Z10 minus Y17
- 11 Forty-seven times Y3
- 12 Ten times a square
- 15 Thirty-two times Y3
- 16 A prime number
- 17 All digits are the same
- 20 Half of X1, then subtract X22
- 21 Mean of X9 and X11

Z Direction

- 1 Sixty-two times a prime number
- 2 Three times a prime number
- 3 A prime number
- 4 A palindrome
- 5 Two hundred fifty-three more than Z4
- 6 Y7 minus Y12
- 10 A prime number
- 11 Nine times a prime number
- 19 X1 plus X22

Solution:

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