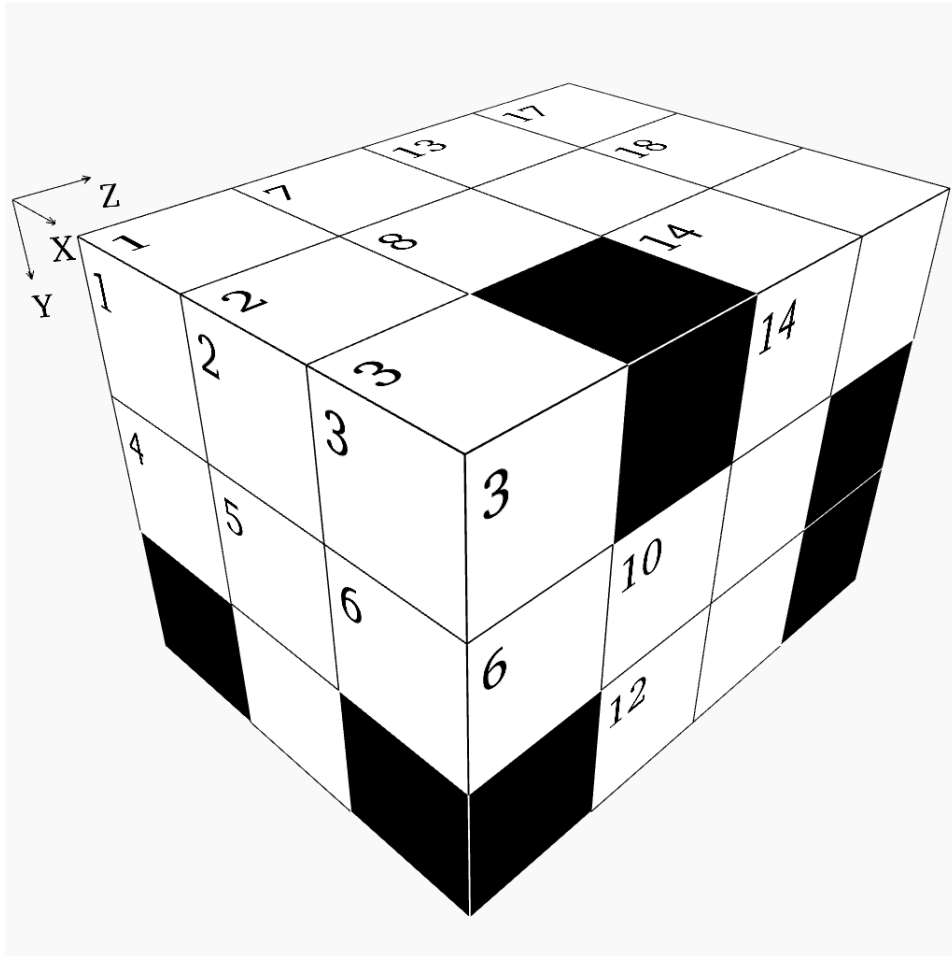# Box - Intermediate Puzzle #49

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
4	5	6
■		■

7	8	■
■	9	10
11	■	12

13		14
■	■	
15	16	

17	18	
19		■
20		■

X Direction

1 Y8 times X9
4 Mean of Y14 and Y10
7 X13 minus X4
9 A square
13 Mean of X15 and Z14
15 Nine times a prime number
17 A prime number
19 Consecutive digits in descending order
20 A square

Y Direction

1 Mean of Z12 and Z14
2 Three times a prime number
3 Y8 plus X20
8 A prime number
10 Z14 minus Z16
14 Same as X15
17 Mean of X17 and Y2
18 Mean of Z11 and X7

Z Direction

1 Eight times a prime number
2 Seventy-six times a prime number
5 Three times a prime number
6 One hundred sixty-five less than X15
11 Fourteen times X20
12 X7 plus X19
14 Seven times a prime number
16 X9 minus X7

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