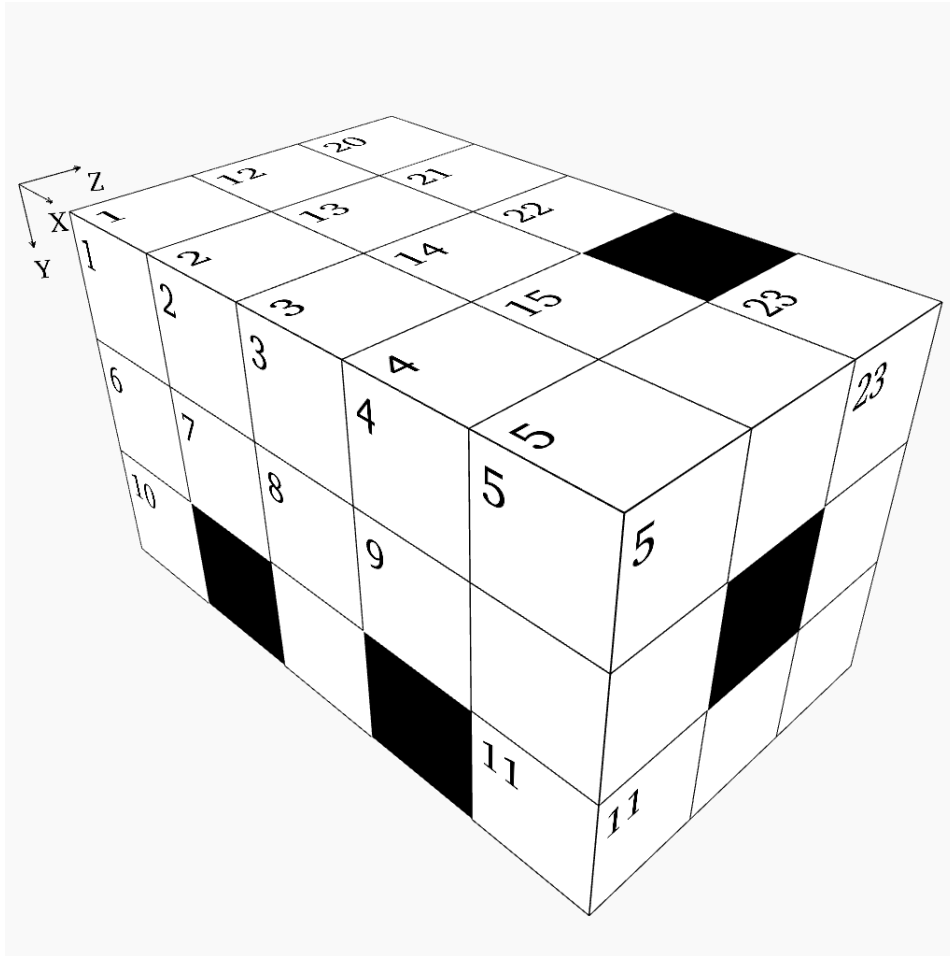# Box - Intermediate Puzzle #6

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	21	22	■	23
■	24		25	
26		■	27	

X Direction

1 First two digits are the same as first two digits of Y1
6 First two digits are the same as Y2
12 Last two digits are the same as last two digits of Z2
16 Ten times Z18
17 Z10 minus Z5
19 A prime number
20 Z5 reversed
24 Twice a prime number
26 Mean of Y25 and X27
27 X26 plus Z19

Y Direction

1 X27 plus Y23
2 Z5 divided by Y22
3 Mean of Y13 and X17
4 Z8 divided by Z4
5 Five times X17
13 One hundred eighty-seven more than Y1
14 X27 minus Y25
15 Nine times a prime number
21 Rearranged digits of Z7
22 Z4 minus Y2
23 Mean of X20 and Z11
25 Y4 plus Y2

Z Direction

1 Y23 plus Y5
2 Half of Y21, then subtract Z9
3 A prime number
4 Z5 divided by seven
5 A square
7 Y3 plus Y14
8 Forty-six times Y2
9 Y15 minus Z7
10 Mean of Z3 and X19
11 Three times a prime number
18 Y4 plus X27
19 X26 minus Y25

Solution:

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