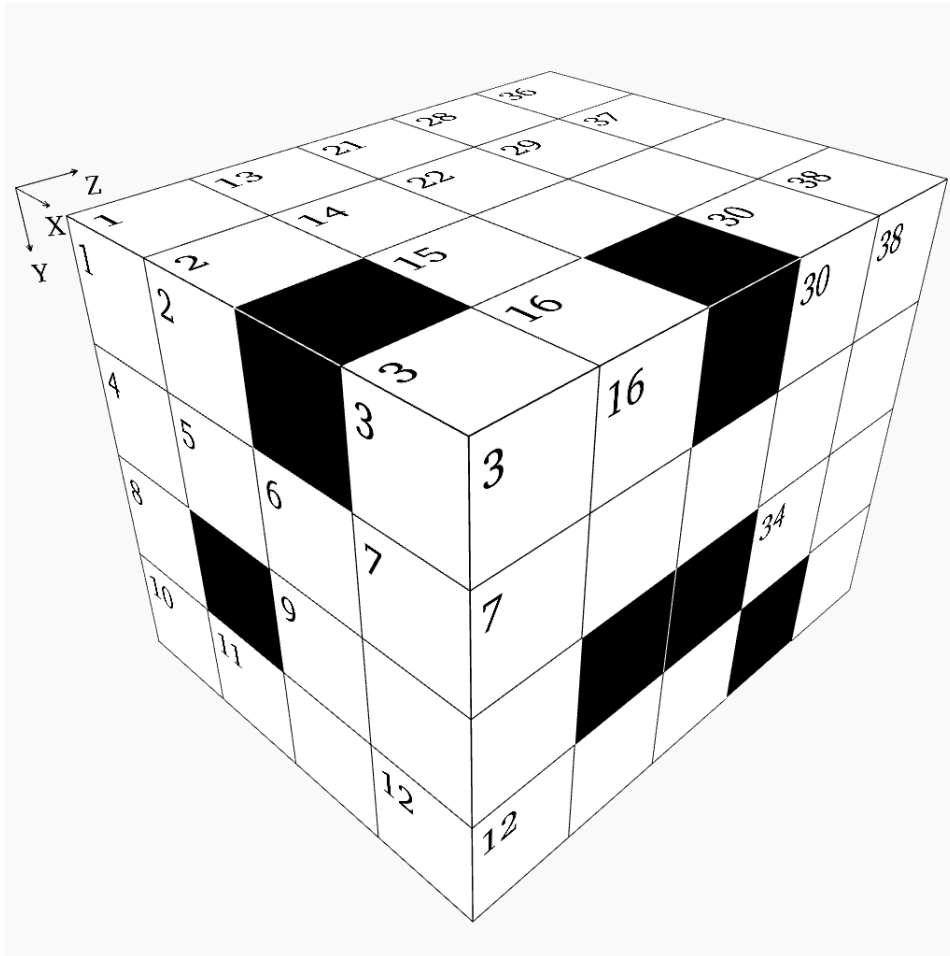


## Box - Hard Puzzle #11



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	13	14	15	16	21	22		
4	5	6	7	17				23			
8		9		18	19				24	25	
10	11		12	20				26		27	
				28	29		30	36	37		38
				31				39			
				32		33	34	40		41	
				35						42	

### X Direction

- 1 Mean of X20 and Z3
- 4 Seventy-four times a prime number
- 9 Z19 minus X13
- 10 Half of Y28, then subtract Z34
- 13 Y22 minus Y21
- 17 X18 plus X26
- 18 Z27 plus Z6
- 20 Mean of X23 and X24
- 21 A prime number
- 23 X42 plus Z32
- 24 Mean of Y16 and X9
- 26 Sixty-eight times a prime number
- 28 Eighteen times a prime number
- 31 Same as Y16
- 32 Sixty-three times X9
- 35 A prime number
- 36 Twenty-six times a prime number
- 39 Mean of Y16 and X9
- 40 Two hundred ninety-one more than X28
- 42 Y33 plus X9

### Y Direction

- 1 Twice the result of X36 minus Y37
- 2 Mean of X24 and Y25
- 3 Y15 plus half of Z15
- 6 Three times a prime number
- 13 Sixteen times a prime number
- 14 Y28 plus Y36
- 15 Z10 minus X32
- 16 Twice the result of Y21 minus X42
- 21 X9 plus Y41
- 22 Fourteen times a prime number
- 25 Z6 minus Z34
- 28 Four times a prime number
- 29 X13 minus Y36
- 30 Y6 minus Z6
- 33 X39 minus Y2
- 36 Mean of Y15 and X31
- 37 Mean of X1 and X18
- 38 A prime number
- 41 Mean of X1 and X23

### Z Direction

- 1 A prime number
- 2 Seventeen times a prime number
- 3 Z30 minus Y2
- 4 Twenty-eight times a prime number
- 5 Six times a prime number
- 6 X20 plus Y25
- 7 A prime number
- 8 Y22 minus Z19
- 9 Five thousand five hundred ninety-four more than Z5
- 10 Mean of Y14 and Y33
- 11 Four times a prime number
- 12 Half of Y13, then subtract Z11
- 15 Ninety-eight times Y41
- 19 Y22 minus Y41
- 27 Mean of Y6 and X42
- 30 X17 divided by X23
- 32 A square
- 34 Mean of X23 and X39

**Solution:**

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