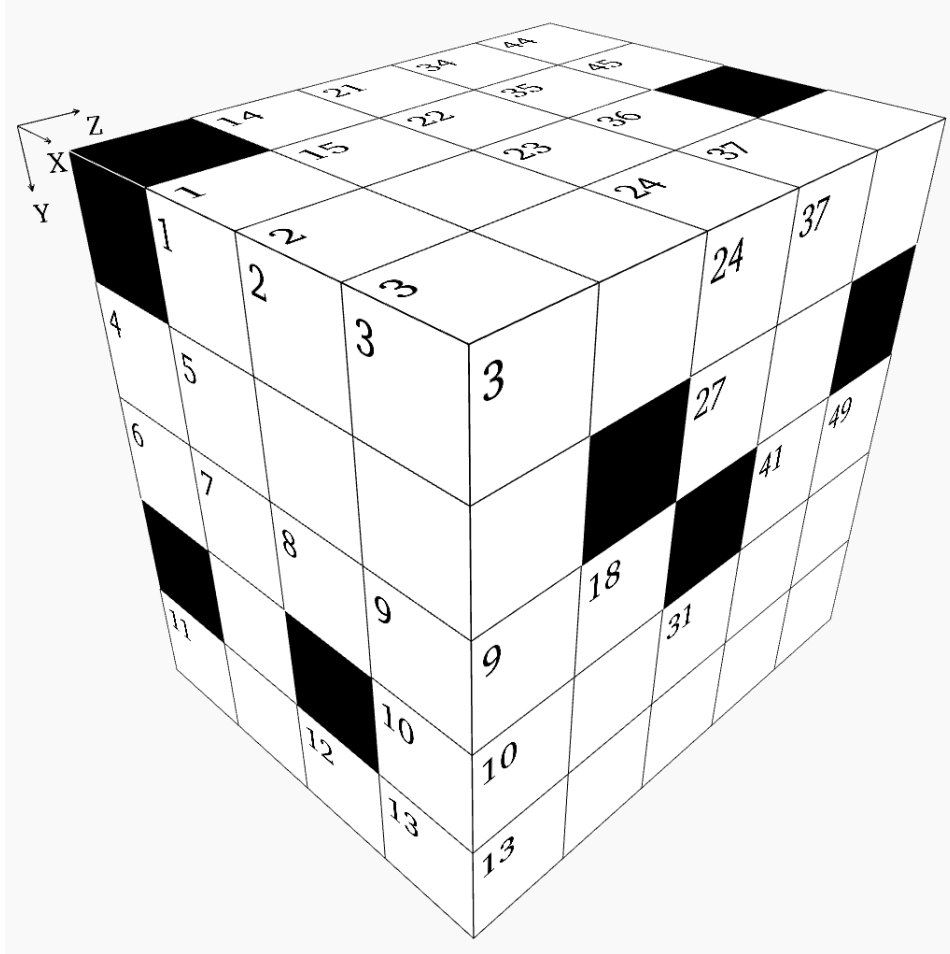


Box - Hard Puzzle #45



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	14	15			21	22	23	24
4	5			16					25	26	27
6	7	8	9	17			18	28			
			10	19				29	30		31
11		12	13			20		32	33		
				34	35	36	37	44	45		
				38				46		47	
				39	40		41	48			49
				42				50			
				43					51		

X Direction

- 1 Twice a prime number
- 4 Mean of X34 and Y24
- 6 A prime number
- 11 Seventy-three times Z40
- 14 Consecutive digits unordered
- 16 X51 minus Z40
- 17 Twice the result of Y35 minus X21
- 20 Y47 divided by fifty
- 21 Fifty-five times a prime number
- 25 Nine times a prime number
- 29 Three hundred eighty-five less than X43
- 32 X14 plus half of Y28
- 34 Three times a prime number
- 38 Two thousand two hundred twelve less than Z19
- 39 Twice a prime number
- 42 X51 minus Z27
- 43 Forty-two times a prime number
- 44 Y30 plus X16
- 46 A prime number
- 48 Twice the result of X38 minus Y44
- 50 Half of X39, then subtract X29
- 51 Mean of Y15 and X44

Y Direction

- 1 X6 plus half of Y3
- 2 Seven times a prime number
- 3 Sixteen times a prime number
- 4 X43 divided by X42
- 14 Mean of Y37 and Z2
- 15 X44 plus X20
- 18 Z26 plus half of Z40
- 22 Half of Z12, then subtract Z3
- 23 Thirty-seven times a prime number
- 24 Mean of Z40 and X16
- 28 Y36 minus X16
- 30 Mean of Z41 and X16
- 31 Y36 divided by nine
- 34 Eighteen thousand six hundred sixty-eight more than Z10
- 35 First two digits are the same as first two digits of X51
- 36 Rearranged digits of Y18
- 37 Last two digits are the same as Y31
- 44 Three times a prime number
- 45 A prime number
- 47 Fifty times Z38
- 49 Mean of X48 and Z9

Z Direction

- 1 Forty-nine times a prime number
- 2 Forty-eight times X51
- 3 Forty-eight times a prime number
- 4 X43 divided by X42
- 5 Last two digits are the same as last two digits of X50
- 6 Rearranged digits of Y23
- 7 Mean of X16 and Y4
- 8 A prime number
- 9 A square
- 10 Last two digits are the same as Y31
- 11 Twenty-six times a prime number
- 12 Ten thousand five hundred fifty-two less than Y34
- 13 A palindrome
- 14 Twenty-eight times a prime number
- 19 A cube
- 26 A prime number
- 27 Mean of Y30 and Z7
- 30 Z2 minus X4
- 33 Seven times a prime number
- 38 Same as X20
- 40 Z9 plus Z41
- 41 Z4 plus X16

