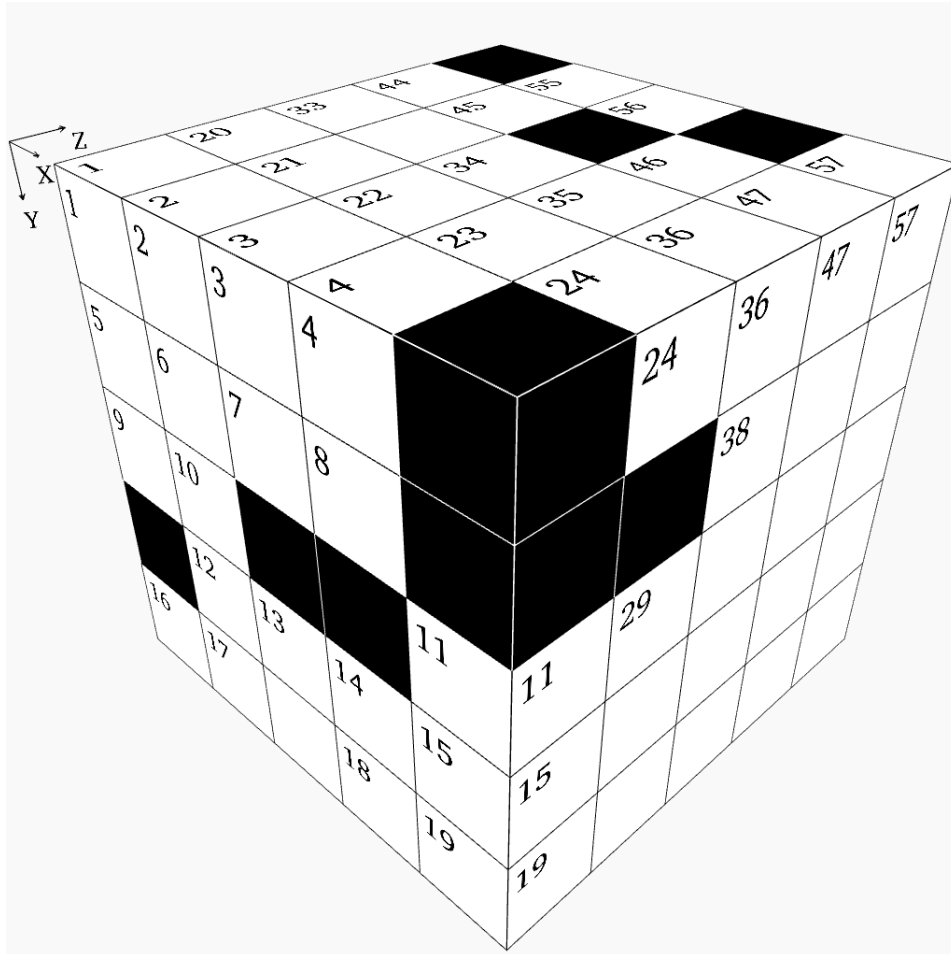


Cube - Hard Puzzle #37



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 cube pictured above and divide it into individual X-Y layers, we will get these planes:

1	2	3	4		20	21	22	23	24	33		34	35	36
5	6	7	8		25							37		38
9	10			11	26		27	28	29	39	40			
	12	13	14	15	30					41				
16	17		18	19	31			32			42	43		

44	45		46	47		55	56		57
48	49	50			58				
51			52					59	
53					60		61		
54									

X Direction

- 1 X59 plus Z9
- 5 Twice a prime number
- 9 Y3 minus Y61
- 12 Eighty-nine times a prime number
- 16 Twice a prime number
- 20 Mean of Y45 and Z38
- 25 One thousand one hundred eighty-nine more than Z4
- 26 Ten thousand eight hundred fifty-three less than Y21
- 30 Mean of Y4 and X1
- 31 X44 minus Y56
- 32 Mean of X46 and X59
- 33 Four times a prime number
- 37 X48 minus X59
- 39 Five times a prime number
- 41 Z38 minus X55
- 42 Twice a prime number
- 44 Z49 plus Y13
- 46 Y52 divided by sixteen
- 48 A prime number
- 51 One thousand four hundred more than Z24
- 53 Seven hundred seventy-five more than X33
- 54 Ninety-one times Y1
- 55 Z5 divided by Z9
- 58 Y23 minus X37
- 59 X44 minus Y14
- 60 Y13 plus X31

Y Direction

- 1 Nine times Y56
- 2 X1 times Y14
- 3 Y21 divided by Y40
- 4 X46 plus X55
- 11 Four times a prime number
- 13 Six times X46
- 14 X9 plus Y56
- 20 Five thousand nine hundred ninety-six less than Y2
- 21 Five thousand two hundred nineteen less than Y34
- 22 Eleven times a prime number
- 23 Z18 minus half of X5
- 29 X59 plus Z38
- 33 Z43 plus Y4
- 34 A prime number
- 35 Y61 plus Z27
- 36 Twenty-two thousand one less than Z7
- 40 Five times a prime number
- 44 Twenty-one thousand eighty-two more than Y34
- 45 Fifty-five times a prime number
- 47 Eleven times a prime number
- 50 Five times a prime number
- 52 Y35 minus Z3
- 55 Twice the result of X53 minus Y22
- 56 X54 divided by X30
- 57 Mean of X51 and Z2
- 61 X30 divided by thirteen

Z Direction

- 1 Z43 plus half of Y11
- 2 Sixty-five times a prime number
- 3 Mean of Z9 and Y61
- 4 A prime number
- 5 Fifty-one times a prime number
- 6 Half of Y3
- 7 Last two digits are the same as last two digits of Z1
- 8 Twice a prime number
- 9 A prime number
- 10 Fourteen times a prime number
- 11 Five times a prime number
- 12 Fourteen times a prime number
- 13 Eighty-eight times Z3
- 15 Y29 plus half of Z10
- 16 Mean of X46 and X59
- 17 Five times a prime number
- 18 Twenty-eight times a prime number
- 19 Last two digits are the same as last two digits of Z12
- 24 A prime number
- 27 A square
- 28 Twelve times a prime number
- 30 Y34 minus Y36
- 38 X30 minus Y52
- 43 A prime number
- 49 Mean of X55 and X9

Solution:

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

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