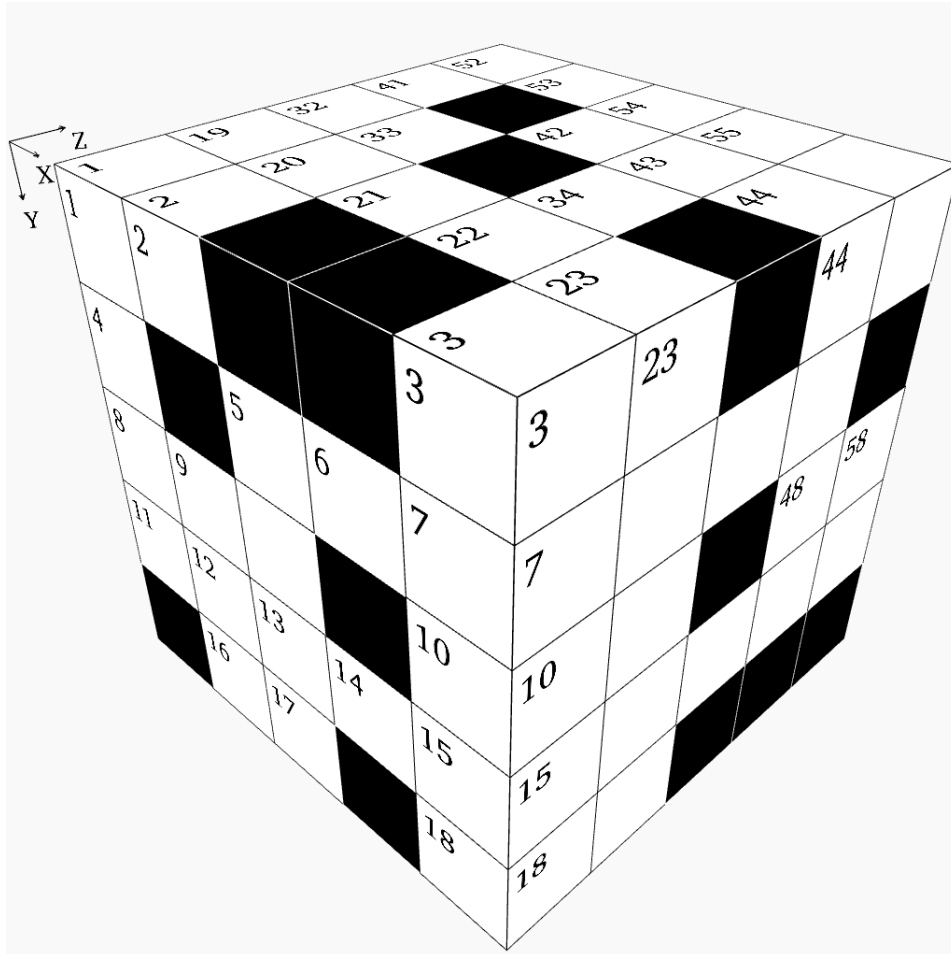


Cube - Challenging Puzzle #24



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

41		42	43	44	52	53	54	55	
45	46				56				
47				48	57				58
	49		50		59				
51						60			

X Direction

- 1 Twice the result of Z14 minus X16
- 5 A prime number
- 8 Z18 plus X26
- 11 Twenty-eight times a prime number
- 16 Mean of Z3 and Z14
- 19 Thirty-two times a prime number
- 24 A prime number
- 26 Z14 minus X27
- 27 Y21 minus Y29
- 28 Twice the result of Y54 minus Z22
- 30 Rearranged digits of Z16
- 32 Z48 reversed
- 35 Z6 plus Z8
- 37 Mean of X47 and Y34
- 39 Z2 minus X47
- 40 Consecutive digits unordered
- 42 Twice a prime number
- 45 Forty-nine times a prime number
- 47 A cube
- 49 Four times a prime number
- 51 Twice a prime number
- 52 Fifteen times a prime number
- 56 Twice the result of Y36 plus Y58
- 57 Fourteen thousand one hundred twenty-five less than X19
- 59 Ninety-three times a prime number
- 60 Mean of X8 and Z30

Y Direction

- 1 Four hundred thirty-one less than X28
- 3 Half of Y55, then subtract Z30
- 5 Twelve times a prime number
- 9 X5 minus X8
- 19 Fifty-three times Z47
- 20 Twice the result of X30 plus Y1
- 21 Five times Z47
- 22 Eighty-two times a prime number
- 23 Last two digits are the same as last two digits of X30
- 29 Y9 minus Z38
- 32 X8 minus Z50
- 33 Eleven thousand nine hundred less than Z5
- 34 Sixty-three times Z27
- 36 Rearranged digits of Y44
- 39 Mean of Z10 and X27
- 41 A square
- 42 X57 plus Y19
- 43 Mean of Z48 and Z50
- 44 Eighteen times a prime number
- 46 Seventeen times a prime number
- 50 Same as X16
- 52 Six hundred fifty more than Y1
- 53 Z15 plus Y23
- 54 Eighteen times a prime number
- 55 Eighteen times a prime number
- 58 Y9 divided by six

Z Direction

- 1 Eighty-five times a prime number
- 2 Y41 minus X60
- 3 Mean of X32 and Y39
- 4 Twenty-eight times a prime number
- 5 Fourteen times a square
- 6 Four times a prime number
- 7 X11 minus Z9
- 8 Z18 minus Z3
- 9 Seven thousand three hundred forty-two less than X59
- 10 Same as Y39
- 12 Three hundred forty-two more than Z4
- 13 Twice the result of Z9 minus Y21
- 14 Mean of Z18 and X60
- 15 Two thousand seventy-three more than Z4
- 16 A prime number
- 17 Eleven thousand two hundred six more than Y22
- 18 Mean of X1 and Y50
- 22 Twenty-one times a prime number
- 25 Three times a prime number
- 27 Half of X51, then subtract X49
- 30 Mean of X8 and X26
- 31 X45 minus Z1
- 38 Twenty-one times a prime number
- 42 Z18 plus Z10
- 44 Y52 divided by Y29
- 47 A square
- 48 Z30 minus Y32
- 50 Z48 plus half of Z18

Solution:

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

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