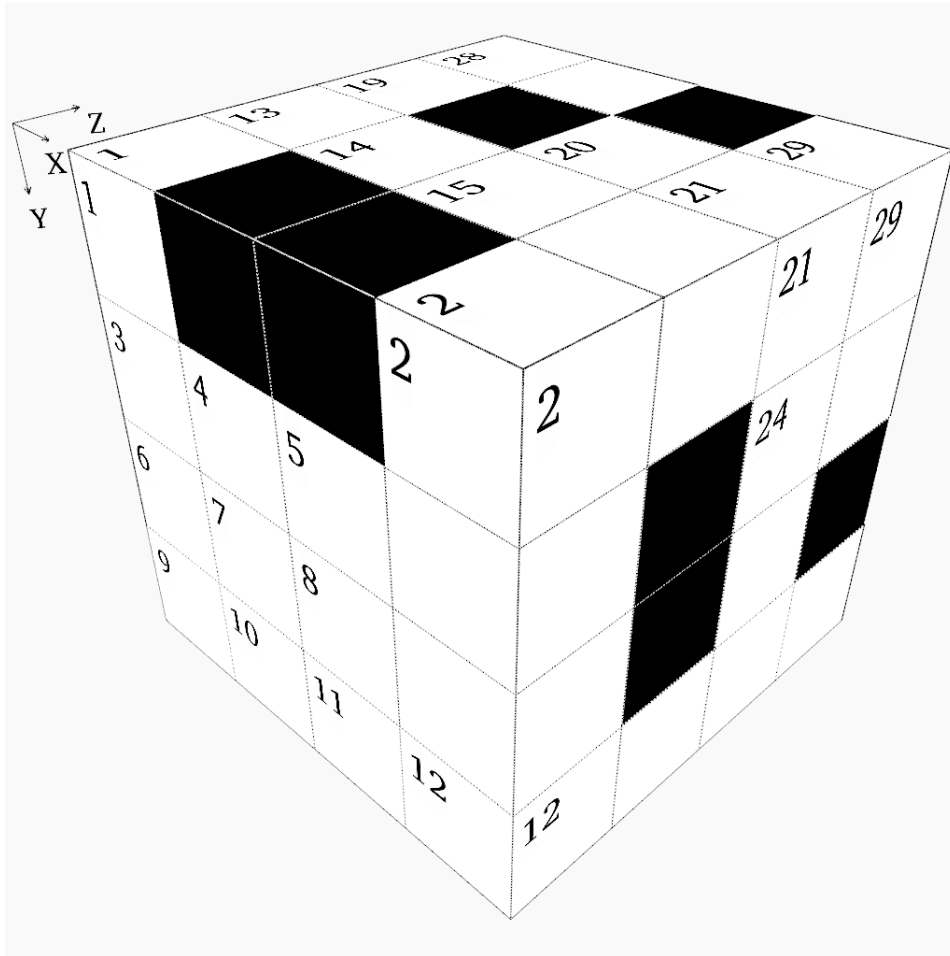


Difficulty: ★★☆☆☆

Cube - Challenging Puzzle #20



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	13	14	15		19		20	21	28			29
3	4	5		16				22	23		24				30
6	7	8		17					25	26		31			
9	10	11	12	18				27							32

X Direction

- 3** Twice the result of X9 plus Y15
- 6** Y19 times X31
- 9** Thirty-six times Y26
- 13** Eighteen times a prime number
- 16** Its digits total Y29
- 17** Three times a prime number
- 18** Eleven times a prime number
- 20** X22 minus Y29
- 22** Three times a prime number
- 25** Three times Y19
- 27** Twenty times a prime number
- 28** Z12 divided by sixty-six
- 30** A square
- 31** X20 reversed
- 32** Twice a prime number

Y Direction

- 1** X27 minus half of X13
- 2** X20 times X28
- 4** A prime number
- 5** Sixty-five times Y29
- 13** X18 minus X25
- 14** Nineteen times a prime number
- 15** Thirty-five times a prime number
- 19** X22 minus X32
- 21** Ten times a prime number
- 23** First two digits are the same as Y26
- 26** X31 minus Z24
- 28** Y26 times X32
- 29** Three-fifths of X30

Z Direction

- 1** Y13 minus Y28
- 2** A prime number
- 3** Nine hundred thirteen more than Z2
- 4** A prime number
- 5** X20 plus X32
- 6** X31 minus X30
- 7** Rearranged digits of X13
- 8** Thirteen times a prime number
- 9** X28 plus Y19
- 10** Eighteen times a prime number
- 11** A prime number
- 12** X18 minus Z24
- 15** Y26 minus Y29
- 24** X17 minus half of Y23

Solution:

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