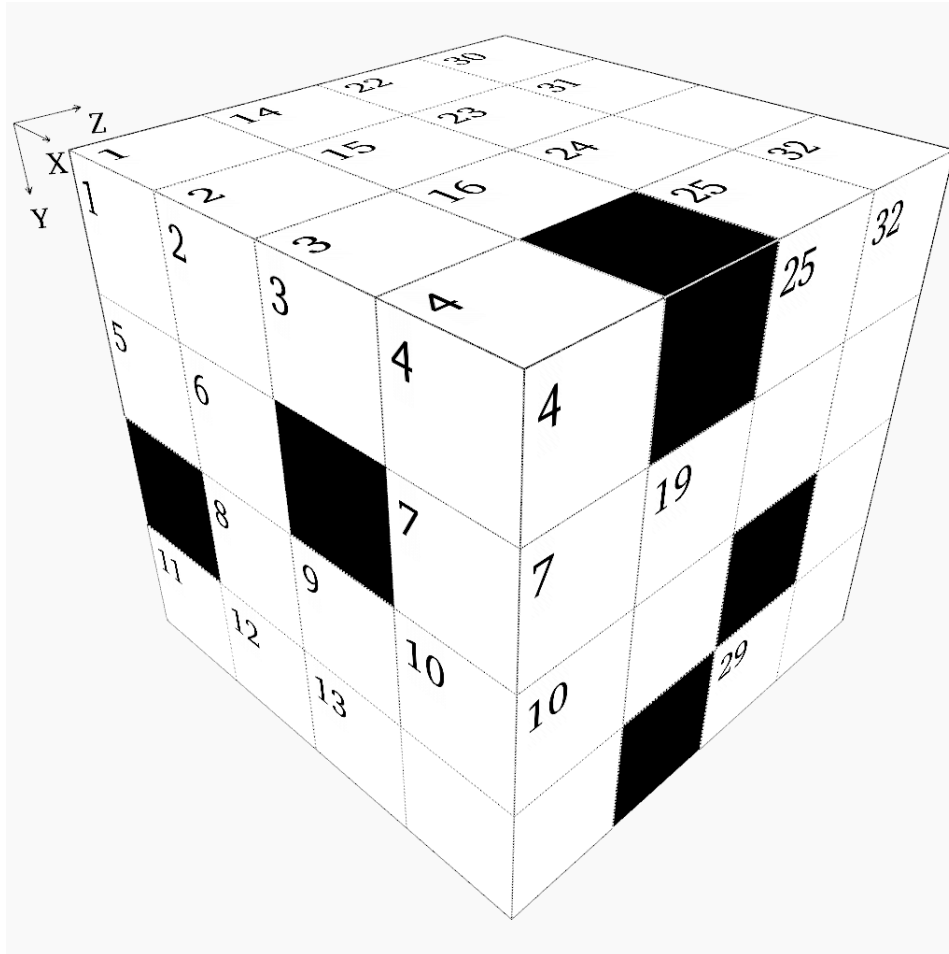


Difficulty: ★★☆☆☆

Cube - Challenging Puzzle #6



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	14	15	16		22	23	24	25	30	31		32
5	6		7	17		18	19		26						
	8	9	10	20				27							
11	12	13		21				28			29			33	

X Direction

- 1** Mean of Z1 and Y24
- 5** Y27 minus Y9
- 8** X27 plus Z20
- 11** X30 plus Z18
- 14** Three times a prime number
- 17** Mean of Y4 and X33
- 20** X33 minus Y9
- 21** Mean of Y16 and X27
- 22** Twelve times a prime number
- 26** First two digits are the same as Y16
- 27** Nine times Z25
- 28** Twice a square
- 30** Twenty-three times a prime number
- 33** Six times Z5

Y Direction

- 1** X20 plus Z5
- 2** Y14 minus X30
- 4** Four times a prime number
- 9** Z25 minus Z20
- 14** Rearranged digits of Y32
- 15** Five times a prime number
- 16** A prime number
- 19** Z29 plus Z20
- 23** Its digits total Z29
- 24** Five times a prime number
- 25** A cube
- 27** A prime number
- 31** Twenty times a prime number
- 32** Twice the result of Z1 minus X21

Z Direction

- 1** Four hundred sixty-one less than X11
- 2** Half of Z8, then subtract Z18
- 3** Mean of Y14 and X8
- 5** X11 divided by Z12
- 6** Z2 plus Z11
- 7** A palindrome
- 8** One thousand five hundred sixty-one more than X30
- 10** Three times Z20
- 11** Z3 plus Y31
- 12** Consecutive digits unordered
- 13** Mean of X22 and Z10
- 18** Y19 plus X20
- 20** X28 divided by fifty-two
- 25** Mean of Y27 and Z18
- 29** Mean of X5 and Z20

Solution:

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