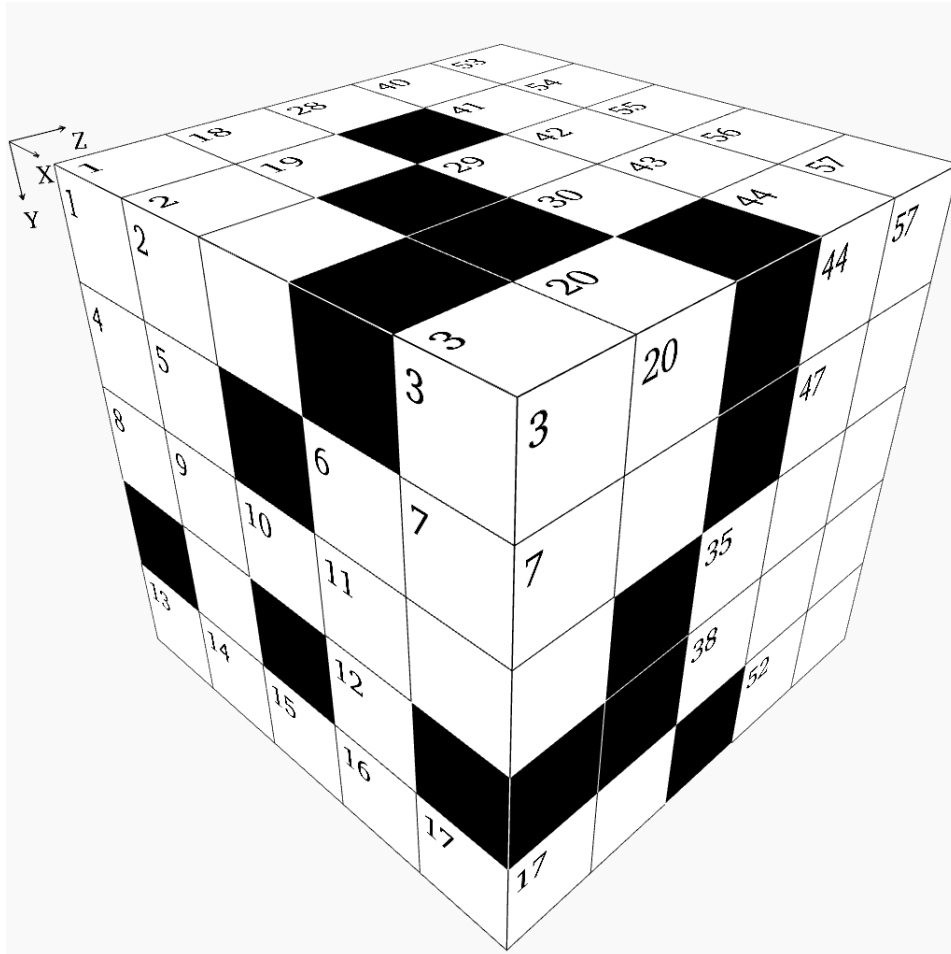


Difficulty: ★★★★★

Cube - Hard Puzzle #10

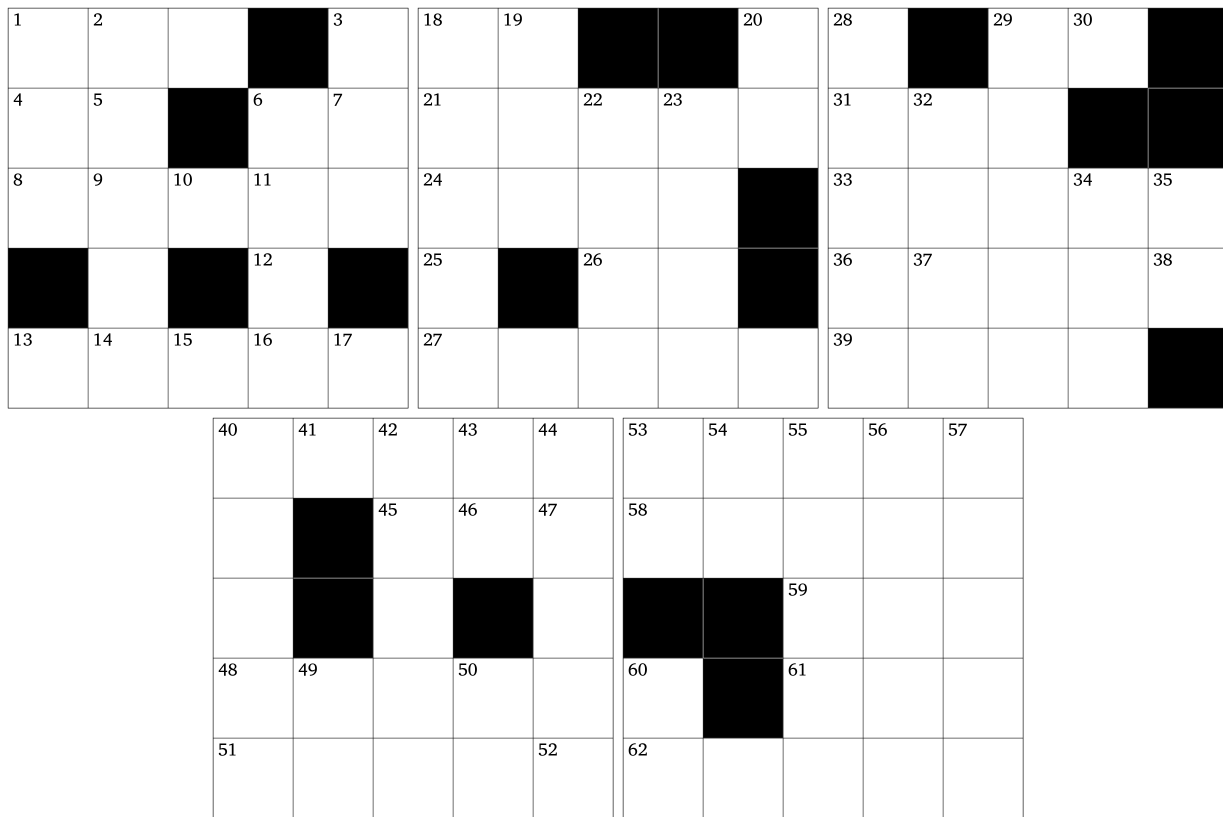


This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X,Y, and Z directions.

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:



X Direction

- 1 A prime number
- 4 Z26 divided by Y1
- 6 Z2 minus Z17
- 8 Y53 plus X21
- 13 A prime number
- 18 Mean of Y50 and Z6
- 21 Mean of Y57 and Y34
- 24 Twice a prime number
- 26 Y20 minus Z41
- 27 Last three digits are the same as Z35
- 29 Y20 minus Z37
- 31 A prime number
- 33 Z2 times Z35
- 36 Sixty-six times a prime number
- 39 A prime number
- 40 Last three digits are the same as X61
- 45 A square
- 48 Twelve times a prime number
- 51 Seventy-five times a prime number
- 53 Seventy-two times a prime number
- 58 Four times a prime number
- 59 Y18 divided by Z46
- 61 Z44 plus Z3
- 62 Seven times a prime number

Y Direction

- 1 Thirteen times X6
- 2 A prime number
- 3 Thirty-four times Z37
- 6 Z25 minus Z8
- 18 Fifty-three times Y3
- 19 Y50 plus X31
- 20 Z47 plus Z52
- 22 Z22 minus Z44
- 23 Seventeen times a prime number
- 28 Y42 minus Z47
- 29 Twenty-two times a prime number
- 32 Twenty-three times a prime number
- 34 Twenty-nine times Y53
- 35 Two-thirds of Y49
- 40 Three times a prime number
- 42 Last two digits are the same as Y60
- 43 Y42 minus Y28
- 44 Forty-five times a prime number
- 49 X33 divided by Z35
- 50 Y1 minus X29
- 53 Z29 divided by Y60
- 54 Y22 divided by X1
- 55 Thirty-eight times a square
- 56 Five thousand two hundred two less than Y18
- 57 A prime number
- 60 X4 minus Z37

Z Direction

- 1 A prime number
- 2 Z3 minus X4
- 3 Z44 plus Z41
- 4 Mean of X27 and X6
- 5 Z6 plus Z29
- 6 Twice the result of Y44 minus Y40
- 7 X26 minus X4
- 8 A prime number
- 9 Y19 plus X26
- 10 Ninety-one times a prime number
- 11 X6 times Z46
- 12 Rearranged digits of Y2
- 13 Mean of X62 and Z5
- 14 Z11 plus half of X36
- 15 X40 minus Z29
- 16 Twice the result of Y55 minus X39
- 17 X8 minus X21
- 22 Six times a prime number
- 25 Sixty-six times Y50
- 26 X4 times Z30
- 29 Z17 times Y60
- 30 X29 plus Y50
- 35 Y49 plus Y19
- 37 Y49 reversed
- 38 Five times a prime number
- 41 Z25 divided by X45
- 44 Y43 plus Z6
- 46 Y20 minus X4
- 47 Z44 minus Z6
- 52 Mean of Z17 and X29

Solution:

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

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