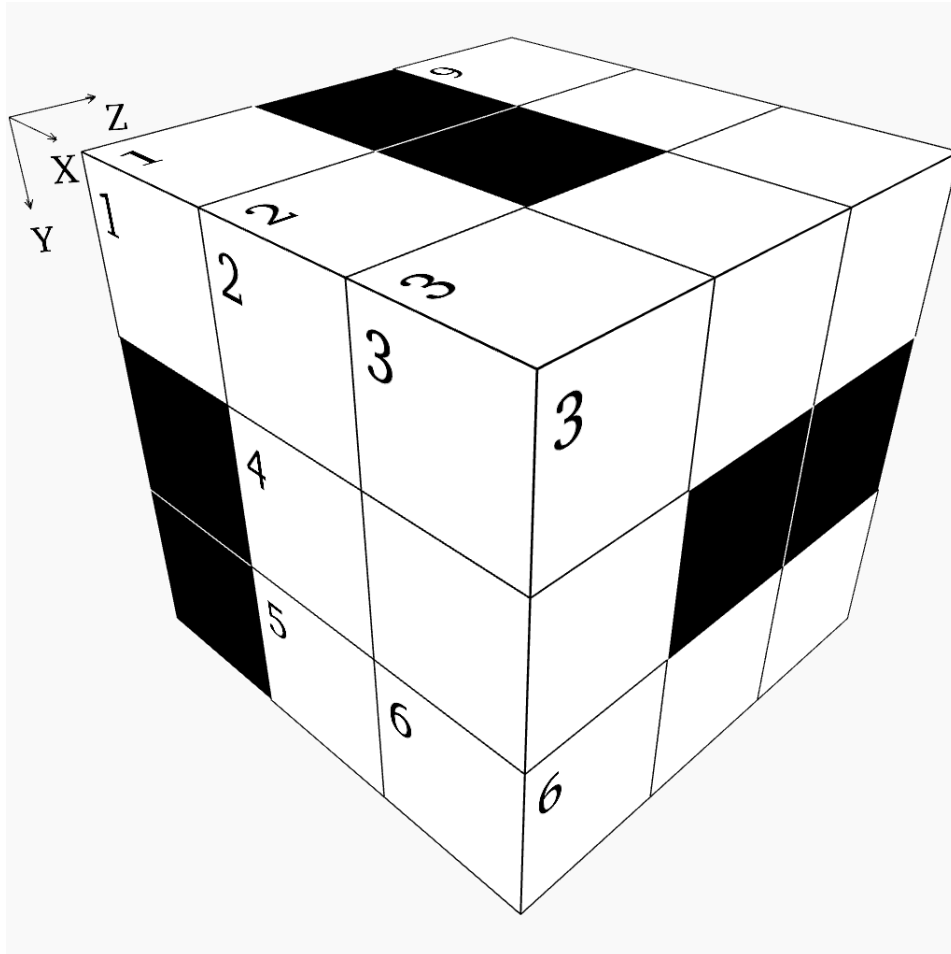


Cube - Intermediate Puzzle #31

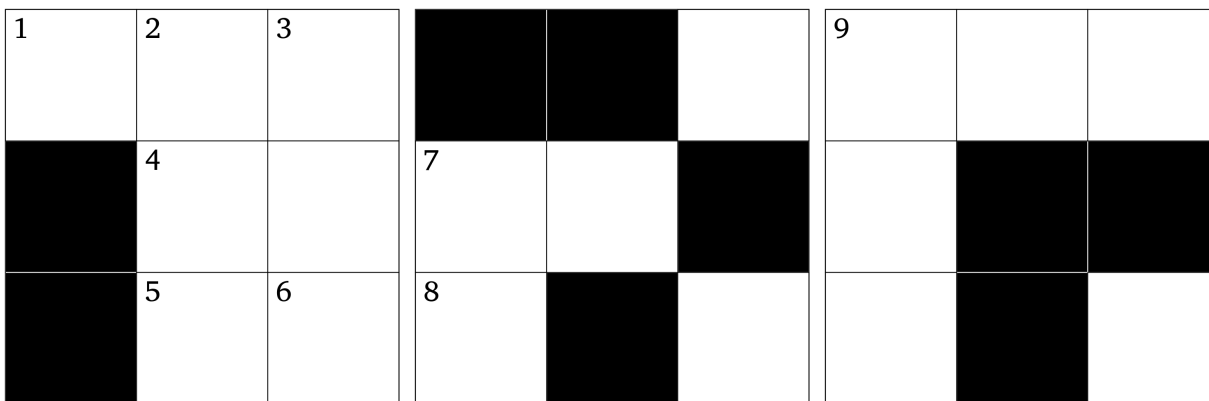


This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X,Y, and Z directions.

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 Twice a prime number
- 4 $X9 - X1$
- 5 A prime number
- 7 Mean of $Z6$ and $X5$
- 9 Ninety times a prime number

Y Direction

- 2 Forty-two times a prime number
- 3 A prime number
- 7 Twice the result of $Z6 - X7$
- 9 Twice the result of $Z3 - Z4$

Z Direction

- 3 Ten times a square
- 4 $X9$ divided by sixty-six
- 6 $X5 + Y7$
- 7 Same as $X7$
- 8 Five times $X4$

Solution:

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