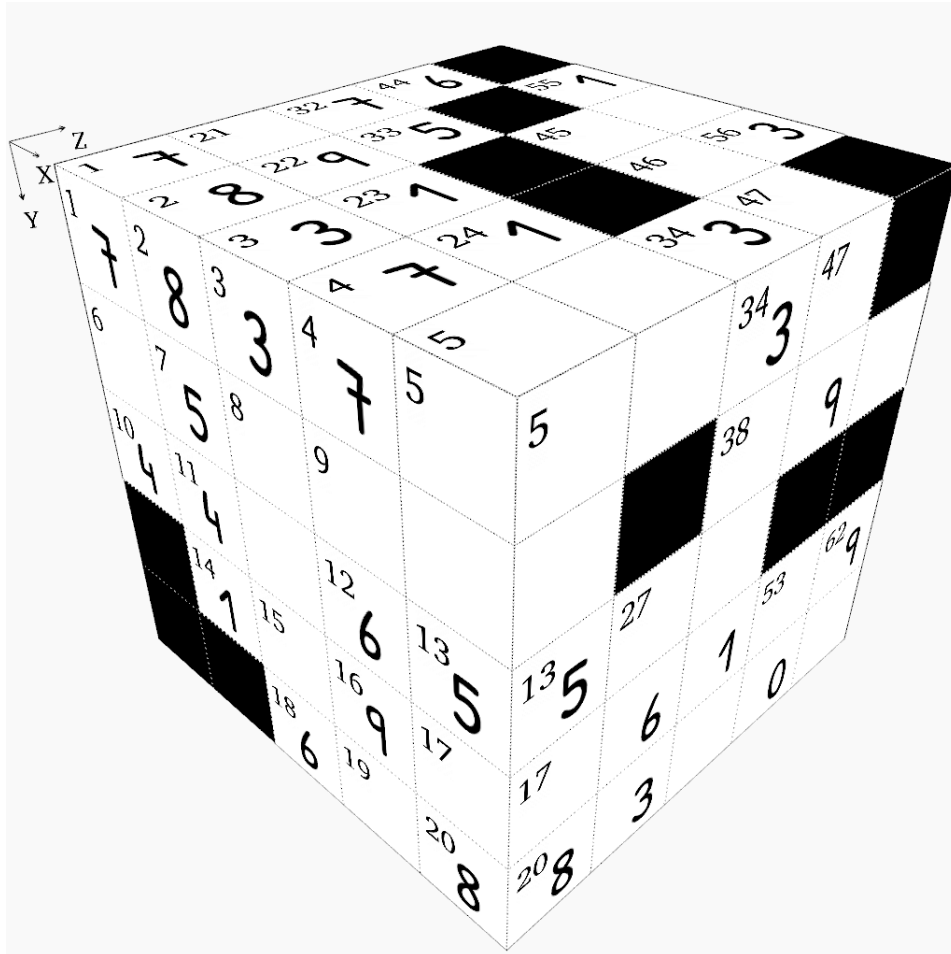


Difficulty: ☆☆☆☆☆

Cube - Beginner Puzzle #34



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 7	2 8	3 3	4 7	5 	21 	22 9	23 1	24 1		32 7	33 5			34 3
6 	7 5	8 	9 			25 9		8		35 7	0	36 2	37 9	38
10 4	11 4		12 6	13 5				26 8	27 	39 7	7	40 		
	14 1	15 	16 9	17 	28 5	9		9	6	41 7		4 	3	1
		18 6	19 	20 8	29 5	30 6		31 2	3	42 3	9	43 	7	

44 6		45 	46 	47 		55 1		56 3	
48 3	49 			9	57 5	4		58 4	
50 4		4			59 5	7	60 5		
51 			52 8	53 	6 		61 		62 9
54 	0	8		0			7		

X Direction

- 1 Four thousand seven hundred thirty-four less than Z20
- 6 First three digits are the same as first three digits of Y2
- 10 Ninety-five times a prime number
- 14 A palindrome
- 18 Z1 divided by Y23
- 21 Fourteen times a prime number
- 25 Z39 plus X55
- 26 Y53 plus X31
- 28 Nine thousand seventeen more than Y33
- 29 Mean of X26 and Y47
- 31 Mean of Y23 and Y56
- 32 Mean of Y62 and X57
- 35 Eight thousand eight hundred twenty-three less than X21
- 39 Three times a prime number
- 41 A prime number
- 42 Seven hundred two more than X48
- 45 X61 plus X26
- 48 A prime number
- 50 Three times a prime number
- 51 Mean of Y53 and X29
- 52 Half of Z9, then subtract Y3
- 54 Twenty times a prime number
- 55 Three times a prime number
- 57 Mean of Y62 and Y23
- 58 Mean of X31 and Z4
- 59 Twenty-five times X31
- 61 Thirty-three times X31

Y Direction

- 1 A square
- 2 First three digits are the same as Y45
- 3 Four times a prime number
- 4 Sixty-two times a prime number
- 5 Mean of Y46 and Y45
- 22 Twenty-four times a prime number
- 23 Y45 minus X45
- 24 Four times a prime number
- 27 Three times a square
- 28 Z46 plus Y23
- 32 A prime number
- 33 Four thousand five hundred ninety-seven more than Y46
- 34 X55 plus half of Y44
- 36 Z5 reversed
- 37 Ninety-one times a prime number
- 44 Ninety-six times a prime number
- 45 One hundred nine more than Z39
- 46 Seven thousand six hundred thirteen more than X48
- 47 X26 minus X57
- 49 Twenty times a prime number
- 53 Four-fifths of X32
- 55 Z35 divided by five
- 56 Mean of X29 and Y23
- 57 Six times X25
- 60 X18 minus Z4
- 62 Y57 divided by X51

Z Direction

- 1 Eighty-one times Y62
- 2 Five times a prime number
- 3 Y53 minus Y47
- 4 Mean of X57 and Z45
- 5 Thirty-eight times a square
- 7 Mean of Z11 and X41
- 8 A square
- 9 Eighty-four times a prime number
- 11 Five thousand four hundred forty-five less than Y46
- 12 A prime number
- 13 Mean of X55 and Z2
- 14 X52 times X31
- 15 Twice a prime number
- 16 Sixteen thousand two hundred seventy-nine more than Z20
- 17 Last two digits are the same as last two digits of X48
- 19 Z8 plus X58
- 20 Two thousand three hundred fifty-seven less than X6
- 28 Four times a prime number
- 29 Sixty-one times Z45
- 30 Twice Z40
- 35 Mean of X59 and Z2
- 38 Mean of Z3 and Y27
- 39 Y28 plus Z30
- 40 Half of Y1, then subtract X58
- 43 Z40 minus X51
- 45 X57 plus Y56
- 46 Half of X52

Solution:

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

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