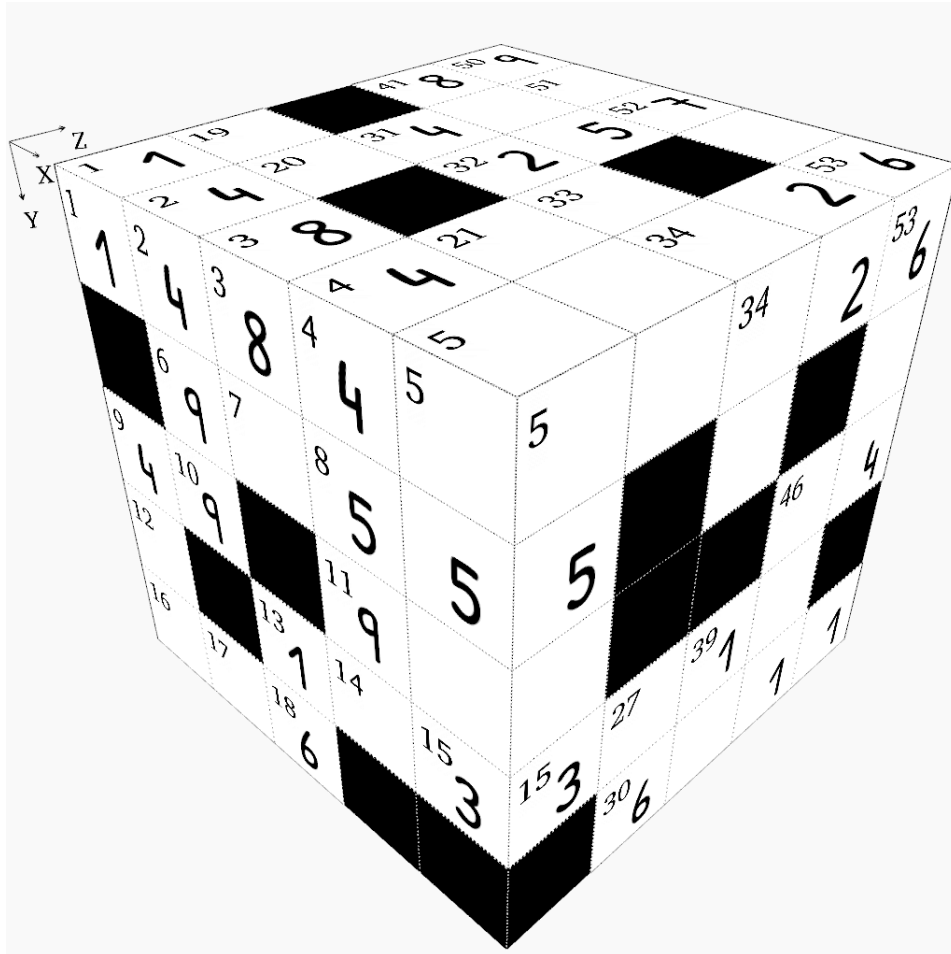


Difficulty: ☆☆☆☆☆

## Cube - Beginner Puzzle #11



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

|         |        |        |         |        |         |        |         |         |         |
|---------|--------|--------|---------|--------|---------|--------|---------|---------|---------|
| 41<br>8 |        | 5<br>  |         | 2<br>  | 50<br>9 | 51<br> | 52<br>7 |         | 53<br>6 |
|         |        |        |         |        | 54<br>  |        |         |         |         |
| 42<br>3 | 43<br> | 44<br> | 45<br>7 | 46<br> | 55<br>1 | 5<br>  |         |         | 4<br>   |
| 47<br>5 | 1<br>  |        | 48<br>  |        | 56<br>  |        | 4<br>   | 57<br>3 |         |
| 4<br>   |        | 49<br> | 3<br>   | 1<br>  | 58<br>4 | 6<br>  |         | 59<br>  | 1<br>   |

#### X Direction

- 1 Rearranged digits of Z9
- 6 Eight hundred twenty-eight less than X40
- 9 A square
- 11 X36 plus X9
- 13 Y5 divided by thirty-one
- 16 Twice a prime number
- 19 Z40 divided by eight
- 21 Z18 divided by Y3
- 22 Thirty times a prime number
- 24 Z29 plus Z1
- 25 A prime number
- 28 Twice a prime number
- 31 Mean of Y52 and Z17
- 35 Two thousand nine hundred twenty-nine less than Z10
- 36 Y46 minus X11
- 37 Mean of X25 and Z26
- 40 Nine times a prime number
- 41 Sixty-five times Z44
- 42 Half of Y21, then subtract X13
- 47 Mean of X48 and Z41
- 48 X41 divided by sixty-five
- 49 A prime number
- 50 Its digits total Y34
- 54 Twice a prime number
- 55 Three times X47
- 56 Forty-seven times a square
- 58 Mean of X21 and Z46
- 59 Z46 reversed

#### Y Direction

- 2 Mean of X48 and Z6
- 3 Four times Y32
- 4 A prime number
- 5 Half of Y52, then subtract Y9
- 9 X41 minus X49
- 13 A square
- 20 Seventeen times a prime number
- 21 Eight thousand two hundred twenty more than Y33
- 23 Twice a prime number
- 24 Y46 minus X9
- 27 A square
- 31 First two digits are the same as first two digits of Y4
- 32 X55 minus Y46
- 33 Thirteen thousand nine hundred four more than Z2
- 34 Z8 minus Z4
- 35 Three times a prime number
- 38 Z8 minus X16
- 39 X9 minus Y27
- 41 Fourteen times a prime number
- 43 X55 divided by three
- 45 Twenty-three times a prime number
- 46 Z13 plus X19
- 50 Two thousand four hundred sixty-eight more than X50
- 51 Nine thousand three hundred seventy more than Z5
- 52 Twice a prime number
- 53 Z17 minus Y13
- 57 Z4 divided by Z46

#### Z Direction

- 1 Y50 divided by Z29
- 2 Z9 plus X48
- 4 Y53 reversed
- 5 Last three digits are the same as last three digits of X35
- 6 Z7 plus Z13
- 7 Z6 minus X13
- 8 X16 plus Y27
- 9 Z2 minus Z44
- 10 First two digits are the same as first two digits of Z35
- 11 Thirty-three times a square
- 12 A prime number
- 13 Same as X13
- 14 Three times a prime number
- 15 A prime number
- 17 X54 minus Y3
- 18 One thousand nine hundred seventy less than Z29
- 26 A prime number
- 29 Fourteen times a prime number
- 30 A prime number
- 32 A prime number
- 35 Consecutive digits in descending order
- 40 A square
- 41 Z1 plus X21
- 44 Z40 minus Y46
- 46 Y41 divided by Z30

## Solution:

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

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