# Intermediate TripleCross Puzzles 

Copyright © 2023 Neil Aggarwal, all rights reserved.

## Instructions

This puzzle is like a crossword, but with numbers. Each digit occupies a hexagonal cell and can be a part of a "word" in the across, up, and down directions.

Rules:

1. "Words" may not start with a zero.
2. "Words" in the 'across' direction read from left to right.
3. "Words" in the 'up' direction read along the upward diagonal to the right.
4. "Words" in the 'down' direction read along the downward diagonal to the right.
5. There is one unique solution which satisfies all the clues given below.


Some "words" may not have clues. They will be determined by the "words" which intersect them.

## For More Puzzles

Please visit http://3DMathPuzzles.com for more TripleCross, CrossFigure, and 3D puzzles!

## About the Author

Neil Aggarwal loves puzzles. Sometimes he is solving an existing puzzle, sometimes he is figuring out how to create new ones. Computer programming is always a good source of puzzles. So is using a new ingredient or making a new recipe. Sometimes the puzzle is to figure out how to get his $4 \times 4$ vehicle across a challenging trail. Life is full of puzzles, and he enjoys all of them. He also loves spending time with his family, friends, and dogs -- who, at times, are puzzles too!

## Puzzle 1



Across
2 Three-fifths of 4 up
3 Three hundred eighty-one less than 3 up

Up
3 A prime number

4 Fifty-five times a square

## Down

1 Half of 3 across, then subtract 2 down
2 Three hundred twenty-five more than 2 across

## Difficulty: $\hat{A} \hat{y} \hat{y}$

## Puzzle 2



Across
2 A prime number
4 Fifty-seven times a prime number 6 Seven times a square

Up
57 up minus 5 down
7 Six times a prime number
8 Forty-two times a prime number

## Down

14 across plus half of 8 up
3 Five times 5 up
56 across minus 2 across

## Difficulty: $\hat{A} \hat{y} \hat{y}$

## Puzzle 3

## Across

26 up plus 4 across
4 Twenty-six times a square
5 Twice a prime number


## Up

5 Mean of 5 across and 6 up
6 Forty-eight times a prime number
7 Twenty-four times a prime number

## Down

1 Fifty-one times a square
2 Mean of 7 up and 4 across
3 Thirty-five times a square

## Puzzle 4



Across
28 down reversed
42 across divided by four
6 Four times a prime number
7 Twice the result of 8 down minus 4 across

Up
3 Mean of 1 down and 5 up
5 A prime number
87 across reversed
9 Half of 6 across, then subtract 1 down

## Down

1 A cube
3 Mean of 2 across and 3 up
5 All digits are the same
82 across reversed

## Puzzle 5



## Across

2 One hundred twenty-three less than 2 down
3 Three-fifths of 2 down

Up
31 down minus 2 across
4 Sixteen times a prime number

## Down

1 Nine times a prime number
2 Two hundred thirty-seven less than 4 up

## Puzzle 6



## Across

2 Fourteen times a prime number
45 across minus half of 2 across
5 Three hundred twenty-three less than 5 up

Up
5 A square
6 A prime number
7 One thousand seven hundred fifty more than 2 across

## Down

1 Sixty-one times a square
2 A prime number
3 Ten times a square

## Puzzle 7



Across
25 up reversed
4 Ninety-two times a prime number
6 All digits are the same

Up
52 across reversed
7 Four times 3 down
81 down minus half of 4 across

## Down

1 Nineteen times a prime number
3 Half of 6 across, then subtract 5 up
5 Two-thirds of 2 across

## Puzzle 8



Across
2 Half of 1 down, then subtract 2 down
3 A square

Up
3 One thousand five hundred eightyseven less than 4 up
4 Two thousand two hundred ninetyeight more than 1 down

## Down

1 Forty-two times a prime number
2 Twenty-three times a prime number

## Difficulty: $\boldsymbol{A} \hat{y}$

## Puzzle 9



## Across

2 A square
3 Five times a prime number

Up
3 A prime number
4 Half of 2 down, then subtract 1 down

## Down

1 Twenty-five times a prime number
2 Nine hundred ninety-nine less than 3 up

## Puzzle 10



## Across <br> 22 down reversed

3 Seventy times a prime number

Up
3 Seven hundred forty-six more than 3 across
43 across minus half of 1 down

## Down

1 Ten times a prime number
2 Nine hundred ninety-five less than
1 down

## Difficulty: $\hat{A} \hat{y} \hat{y}$

## Puzzle 11



Across
25 up minus 4 across
4 A square
64 across plus 3 up
7 A prime number

Up
3 Mean of 5 down and 6 across
5 A square
8 Mean of 8 down and 1 down
9 A cube

## Down

1 Mean of 8 up and 3 down
3 A prime number
5 A square
8 Twice the result of 1 down minus 7 across

## Puzzle 12



## Across

2 A prime number
3 Two hundred eighty-three less than 3 up

Up
3 A prime number

4 Ninety-one times a prime number

## Down

1 Two thousand one hundred ninetyseven more than 4 up
2 Half of 1 down, then subtract 3 across

## Difficulty: $\hat{A} \hat{y} \hat{y}$

## Puzzle 13



Across
2 Four hundred twenty less than 2 down
4 Twenty-four times a prime number
5 A prime number

Up
5 Half of 2 down, then subtract 6 up

Down
1 Twenty-one times a square
6 First two digits are the same as first two digits of 7 up
7 Half of 2 across, then subtract $1 \quad \mathbf{3}$ Five times a prime number

## Puzzle 14



## Across

24 up minus half of 1 down
3 Sixty-three more than 3 up

## Up

3 Nine times a prime number
4 Thirty-nine times a prime number

## Down

1 Two thousand four hundred fortyseven less than 3 up
2 Two-fifths of 3 across

## Puzzle 15



## Across

2 Sixty-eight times a prime number
4 Ten times a prime number
5 Fifty-seven times a prime number

Up
5 Rearranged digits of 2 down
6 Four times a prime number
7 Four times a prime number

## Down

1 Half of 2 across, then subtract 3 down
25 across plus half of 4 across
3 Three times a prime number

## Puzzle 16



Across
2 Mean of 6 across and 3 down
45 up reversed
6 Twice 7 across
7 All digits are the same

Up
35 down minus 7 across
52 across plus half of 1 down 8 Ten more than 3 down
97 across plus 3 up

## Down

19 up minus 8 up
3 Half of 5 up
51 down plus 8 up
8 Twice the result of 6 across minus 4 across

## 

## Puzzle 17



Across
18 across minus 12 down
3 Five times 1 across

513 up plus 4 up
8 Twice the result of 2 down plus 13 down

10 Eight times a prime number
14 Mean of 20 across and 7 down
16 Half of 21 up, then subtract 20 across
18 Mean of 11 down and 14 across
20 Half of 6 down

Up
45 across minus 13 down
7 Same as 14 across

11 Mean of 14 across and 3 across
1221 up minus 6 down
13 Half of 12 up, then subtract 1 across

15 Mean of 21 up and 20 across
17 Its digits total 18 across
194 up minus 2 down
2111 down plus 4 up

## Down

2 A square
4 First two digits are the same as 3 across

65 across reversed
7 Four-fifths of 7 up
9 Five times 13 up

11 Mean of 15 up and 13 up
127 up plus half of 9 down

1319 up minus 18 across
1721 up minus 4 up

## Puzzle 18



## Across

2 Ninety-nine more than 2 down
3 A palindrome

Up
$\mathbf{3}$ Half of 4 up, then subtract 1 down
4 Forty-four times a prime number

Down
1 One thousand two hundred seventeen less than 2 across
2 A prime number

## Puzzle 19



Across
2 Twice a square
3 Three more than 3 up

Up
32 down reversed
4 Eighty times a prime number

## Down

13 across minus half of 4 up
2 A prime number

## Difficulty: $\boldsymbol{A} \hat{y}$

## Puzzle 20



## Across

2 Thirty-six times a prime number
3 Two hundred ninety-eight more than 4 up

Up
3 A square
4 Half of 1 down, then subtract 2 down

## Down

1 Twice a prime number
2 A prime number

## Dififuly

## Puzzle 21



Across
1 Twice the result of 15 down plus 14 up
48 up minus 5 down
61 across minus 9 up

8 A prime number
10 Sixty-one times 17 across
121 across minus 9 down
15 A square
17 Half of 4 across, then subtract 5 down

## Up

17 up plus 2 down
713 down minus 17 up
8 Twice the result of 9 up plus 6 across

9 Same as 9 down
13 A square
142 down minus 17 up
1612 across times 11 down
172 down minus 17 across

## Down

1 A prime number
2 Mean of 3 up and 14 up
59 up plus 11 down

7 A square
9 Mean of 14 up and 15 across
1116 up divided by 6 across
13 Thirty-eight times 14 up
151 across minus 6 across

## 

## Puzzle 22



## Across

2 Forty-six times 8 across
5 Eight times a prime number
712 up minus 11 down
8 A prime number
9 Twice a prime number
12 Sixty-nine times a prime number

Up
6 A square
9 Three times a square
10 Twice a prime number
12 A prime number
13 Twice the result of 14 up minus 12 across
14 Five times a prime number

## Down

1 Nine times a prime number
210 up minus 6 up
3 Twelve times a prime number
4 Three times a prime number
7 Mean of 9 up and 7 across
11 Three-fourths of 3 down

## Difficulty: $\boldsymbol{A} \hat{y} \hat{y}$

## Puzzle 23



## Across

2 Twice the result of 7 up minus 10 up
5 A prime number
6 Fifty times a prime number
7 Six thousand one hundred three more than 2 down
9 Fourteen times a prime number

Up
7 Eighty-two times a prime number
8 Twice the result of 5 across plus 9 across
9 Twice the result of 4 down minus 11 up
10 Twenty-nine times a prime number

11 Eight thousand four hundred two less than 5 across

## Down

1 One thousand four hundred twelve more than 7 up
2 Three times a prime number
3 Twenty thousand five hundred ninety-six more than 4 down
4 Twice a prime number

6 Nine times a prime number

## 

## Puzzle 24



Across
1 Twice 4 down
3 Half of 9 across, then subtract 6 down
5 Mean of 1 across and 16 down
9 Twenty times a prime number
11 A prime number
1312 up minus 21 up
15 Twenty-four times a prime number
18 A prime number
2213 across minus half of 12 down
2416 down minus half of 14 down

Up
224 across divided by five
8 Mean of 24 across and 2 up
10 Twenty-one less than 11 across
12 Rearranged digits of 16 down
15 Eighty-seven times a prime number
19 Forty times a prime number
20 Five times a prime number
21 A cube
23 Twice a prime number
252 down minus 21 up

## Down

21 across plus half of 25 up
45 across minus 17 down

6 Twice a prime number
7 Fifteen times a prime number
89 down divided by 8 up
98 up times 25 up
1218 across minus 13 across
14 Two-thirds of 5 across
16 Twice 17 down
17 All digits are the same

## Solutions

Puzzle 1


Puzzle 3


Puzzle 5


Puzzle 2


Puzzle 4


Puzzle 6


Puzzle 7


Puzzle 9


Puzzle 11


Puzzle 8


Puzzle 10


Puzzle 12


Puzzle 13


Puzzle 15


Puzzle 17


Puzzle 14


Puzzle 16


Puzzle 18



Puzzle 20

Puzzle 21


Puzzle 22

Puzzle 23


Puzzle 24


## Want More Puzzles?

Check out these books on Amazon:


## Acknowledgements

This book could not be possible without a lot of help, especially from the following:
Jim Bumgardner (krazydad) whose excellent site http://krazydad.com provided many hours of enjoyment and inspired me to create puzzles of my own. He has also been very generous providing tips and support.

Yochanan Dvir whose cross-figure puzzles formed the reference material for the puzzles.
Jared McComb (bosuonparedo) who started me down the path to create the hexagonal puzzles. Phil Bordelon (Sunfall) who suggested the name TripleCross.

Dave Millar (Taco Dave) who suggested I create books.
All the users on the krazydad discord server who tested the puzzles and gave feedback.
Norma for her suggestions and editing help.
Sora Sagano for the Aileron font.
Charis SIL font Copyright (c) 1997-2022 SIL International (http://www.sil.org/) with Reserved Font Names "Charis" and "SIL". Licensed under the SIL Open Font License, Version 1.1, available at http://scripts.sil.org/OFL

Patrick Hand font Copyright (c) 2010-2012 Patrick Wagesreiter (mail@patrickwagesreiter.at), licensed under the SIL Open Font License, Version 1.1, available at http://scripts.sil.org/OFL UXWing.com for the star icons.

All trademarks and copyrights are the property of their respective owners.

