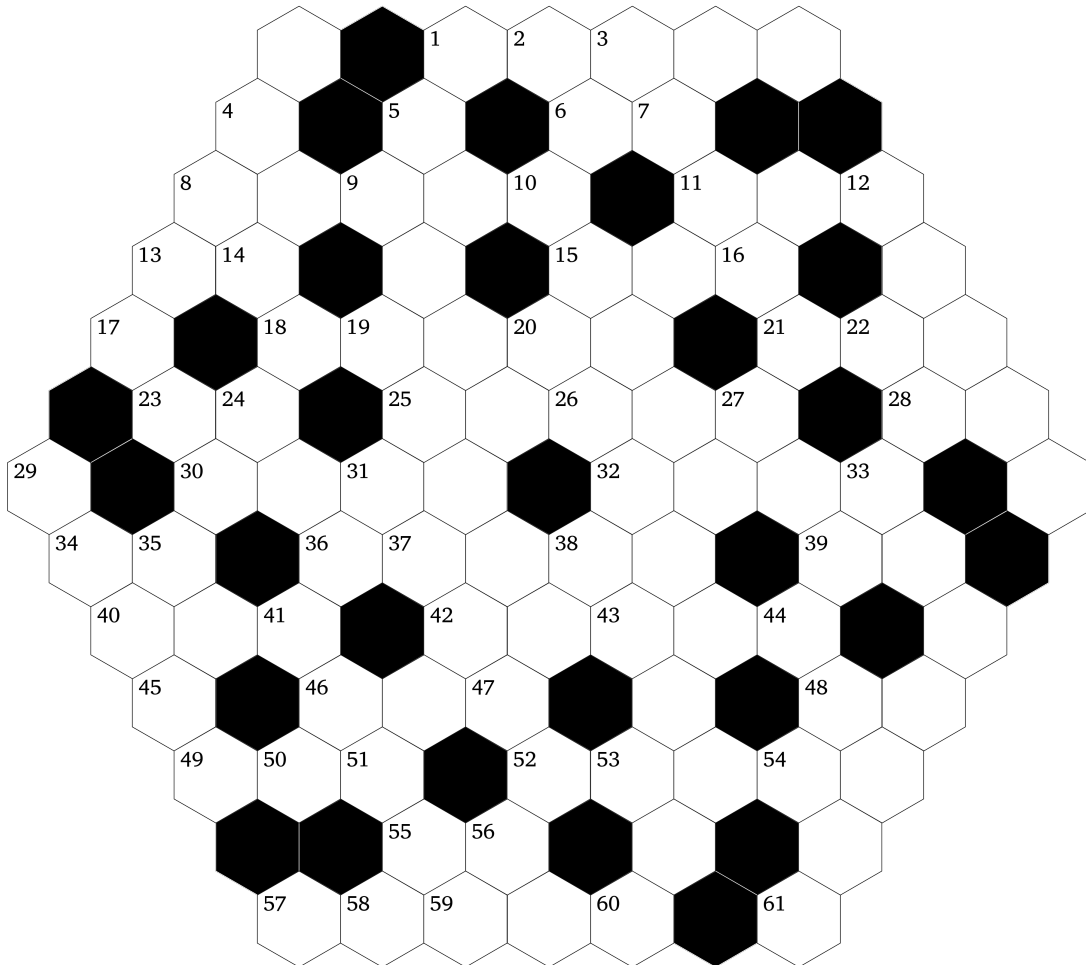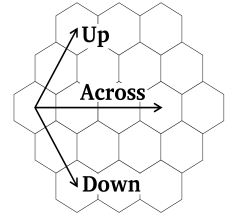Difficulty: ★★★★☆

TripleCross - Hard Puzzle #45

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

Across

1 Two thousand three hundred forty less than 10 down
6 Mean of 50 up and 46 across
8 Four times a prime number
11 Mean of 19 up and 33 down
13 19 up divided by 22 down
15 Three times a prime number
18 Ten times a prime number
21 Five times a prime number
23 59 up minus half of 54 up
25 Four times a prime number
28 22 down plus 50 up
30 Last two digits are the same as last two digits of 60 up
32 Nineteen times a prime number
34 16 up reversed
36 Ten times a prime number
39 58 up minus 35 down
40 53 up plus 4 down
42 Twice a prime number
46 54 up plus 39 across
48 A square
49 11 across minus 22 down
52 Mean of 38 down and 61 up
55 45 up minus 13 across
57 Three thousand seven hundred ninety-two more than 44 up

Up

7 Mean of 48 across and 39 across
9 49 across plus half of 5 down
10 Mean of 15 across and 55 across
14 Mean of 7 up and 59 up
16 A square
17 Twenty times a prime number
19 Mean of 40 across and 49 across
22 14 up minus 53 down
26 55 across times 54 up
37 Twenty-nine times a prime number
40 17 up minus 14 up
41 Ten times a prime number
43 Last two digits are the same as last two digits of 38 down
44 Two thousand one hundred fifty-five less than 36 across
45 57 across minus 10 down
47 One hundred seventy-eight less than 25 across
50 14 up minus 55 across
51 Five times a square
53 19 up plus 45 up
54 Mean of 16 up and 59 up
58 4 down plus 7 up
59 13 across plus 54 up
60 44 up minus 12 down
61 Three thousand two hundred fifty-one more than 57 across

Down

2 14 up minus 22 up
3 Three thousand one hundred eighty-one less than 37 up
4 28 across minus 22 up
5 Mean of 59 up and 53 down
8 Mean of 40 across and 6 across
9 Twenty-six times a prime number
10 First two digits are the same as first two digits of 9 up
12 Forty-one times a prime number
17 Half of 25 across, then subtract 36 across
19 11 across times 46 across
20 Three times a prime number
22 5 down minus 23 across
24 Half of 43 up, then subtract 41 up
27 Nineteen times a square
29 27 down plus half of 61 up
31 37 up plus 32 across
33 44 down minus 6 across
35 46 across minus 5 down
38 Four times a prime number
41 A prime number
44 39 across plus 8 down
53 Mean of 58 up and 4 down
54 1 across divided by 53 up
56 7 up minus 13 across

Solution: