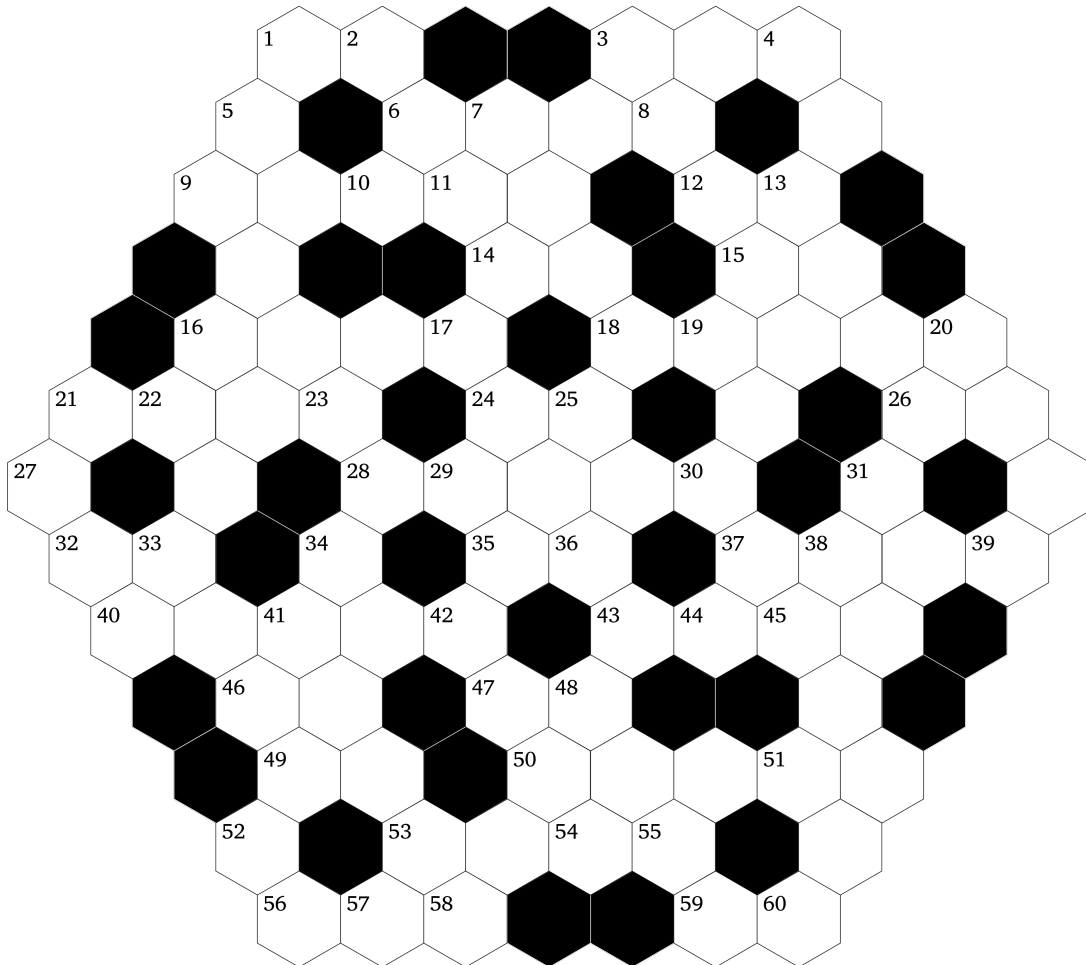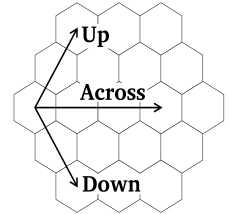# TripleCross - Hard Puzzle #19

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 Half of 42 down, then subtract 13 down
3 Twice a prime number
6 51 up plus 38 down
9 Last two digits are the same as 14 across
12 A square
14 Mean of 34 down and 11 up
15 51 down minus 29 down
16 19 up minus 22 down
18 Twelve thousand nine hundred thirty-six more than 3 down
21 Half of 9 across, then subtract 30 down
24 46 across minus 27 up
26 Mean of 5 down and 22 down
28 First two digits are the same as first two digits of 21 across
32 33 down divided by 59 across
35 14 across plus 54 up
37 41 down minus 48 down
40 Six times a prime number
43 Consecutive digits unordered
46 4 down reversed
47 5 down minus 26 across
49 Mean of 51 down and 5 down
50 Twenty-two times a prime number
53 46 up plus half of 9 up
56 Three times 1 across
59 A square

Up

8 11 up minus 22 down
9 Twice a prime number
10 36 up minus 32 across
11 Mean of 16 down and 54 up
17 A prime number
19 Thirty-nine times a prime number
22 8 up plus half of 43 across
23 44 up minus 47 across
27 25 down minus 11 up
29 A square
30 Twenty times a prime number
36 19 down plus 8 up
39 Mean of 47 across and 51 down
40 One thousand seven hundred eighty-one less than 40 across
42 Twice the result of 40 across minus 56 across
44 51 down minus 15 across
45 Mean of 3 down and 20 down
46 Two thousand one hundred forty-four less than 6 across
51 6 across minus 12 across
52 Forty-three times 54 up
54 31 down minus 14 across
55 4 down plus 47 across
57 46 across minus 44 up
58 Eighteen thousand eight hundred seventeen more than 9 across
60 Twice a prime number

Down

2 Thirty-five times a prime number
3 Twenty-two thousand two hundred ninety-nine less than 58 up
4 2 down minus 7 down
5 Mean of 54 up and 32 across
7 Fifty-four times 25 down
9 A prime number
13 Eighteen times a prime number
16 Mean of 5 down and 32 across
17 Mean of 50 across and 36 up
19 Twice the result of 27 up plus 52 down
20 56 across minus 54 up
22 35 across minus 46 across
25 55 up minus 23 up
27 Six times 29 down
29 36 up reversed
30 First two digits are the same as 44 up
31 Same as 51 down
33 Forty-nine times a prime number
34 Mean of 12 across and 19 down
38 A square
41 A prime number
42 One thousand ten more than 48 down
48 Sixteen times a prime number
51 39 up plus 54 up
52 15 across minus 14 across

Solution:

Hard-19