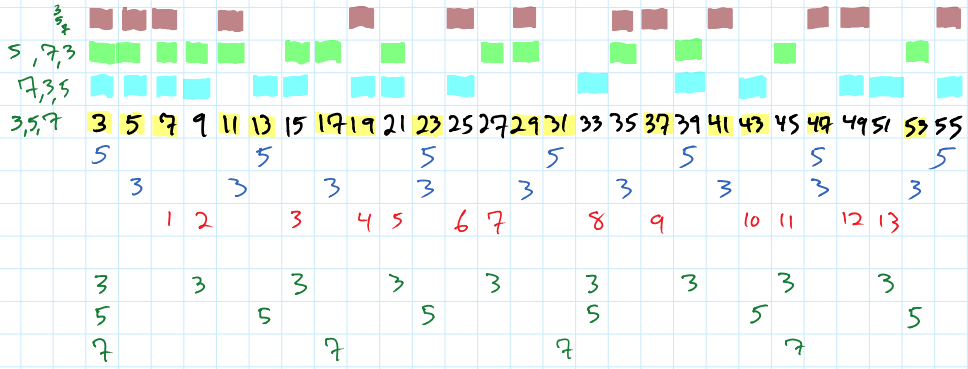
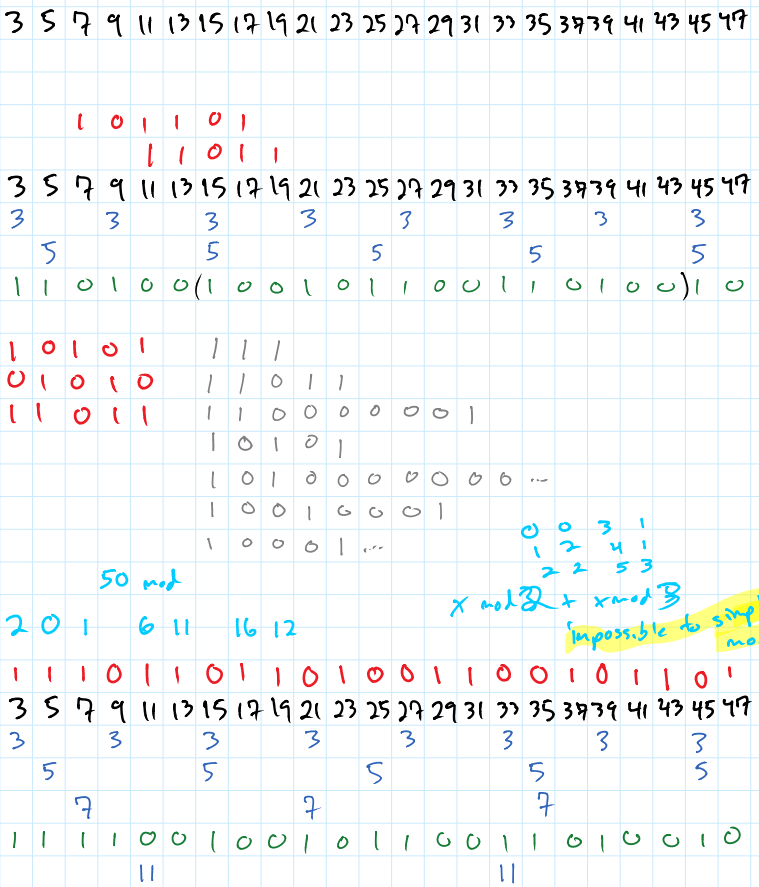
and more

Thursday, March 12, 2015 06:18



There will always be certain patterns that cannot be filled by any section of first n prime sieve. Minimum length of such patterns...?



could it have to do with hitting/generating twin prime holes?

maybe the problem stems from the fact that you de facto are trying to avoid composites during your shift, and since composites are regular (generated by the very primes you're trying to shift), you something something

or, is it possible to prove that the first n primes must overlap at least every so often in a given length slice of a period?

note: the maximum non-overlap is probably the standard start along with its reflection about the origin

every hole that the 3 5 7 sieve digs out is coprime to each of them. in order for that hole to be landed on after shifting, one or more of those factors must now be made multiples of that hole, but does that whack-a-mole fruitlessly?

3x+2
5x+3
15x+8
30x+8
11x+7
330x+

105
158
278

modded into 11, 13, 17, 19:
3: 2, 1, 2, 1
5: 1, 3, 2, 4
7: 4, 6, 3, 5

modded into 3, 5, 7:
3: 0, 2, 1
5: 3, 0, 2
7: 3, 5, 0

mod	3	5	7	11	13	17	19
3	0	2	1	2	1	2	1
5	3	0	2	1	3	2	4
7	3	5	0	4	6	3	5

5 3 7 3 5 3

1. you start at

e.g. 50 ≈ 7², shifty like.

1. prove N mod 3 = 2 vs 1 stays bounded (what is controlling step)

mod	3	5	7	11	13	17	19	23	29	31
3	0	2	1	2	1	2	1	2	2	1

5: 3, 0, 2
7: 3, 5, 0

mod	3	5	7	11	13	17	19	23	29	31
3	0	2	1	2	1	2	1	2	2	1
5	3	0	2	1	3	2	4	3	4	1
7	3	5	0	4	6	3	5	2	1	3
11	3	5	7	0	2	6	8	1	7	9

mod	3	5	7	11	13	17	19	23	29	31	37	41	43
3	0	2 3	1	2 3	1	2 3	1	2 3	2 3	1	1	2 3	1
5	3	0	2 5	1	3	2 5	4	3	4	1	2 5	1	3
7	3 7	5	0	4	6	3 7	5	2	1	3 7	2	6	1
11	3	5	7	0	2 11	6	8	1	7	9	4	8	10
13	3	5	7	11	0	4	6 13	10	3	5	11	2	4

try using the empties to predict ahead of what the prime bit string would need to be, assuming that we know it will fail within the sqrt range

this should lead to a conceptual understanding of what is going on

mod	3	5	7	11	13	17	19	23	29	31	37	41	43	47	53	59	61
3	0	2 3	1	2 3	1	2 3	1	2 3	2 3	1	1	2 3	1	2 3	2 3	2 3	1
5	3 5	0	2	1	3 5	2	4	3 5	4	1	2	1	3 5	2	3 5	4	1
7	3	5 7	0	4	6	3	5 7	2	1	3	2	6	1	5 7	4	3	5 7
11	3	5	7 11	0	2	6	8	1	7 11	9	4	8	10	3	9	4	6
13	3	5	7	11 13	0	4	6	10	3	5	11 13	2	4	8	1	7	9
17	3	5	7	11	13	0	2	6	12	14 17	3	7	9	13	2	8	10