

Colorado (and Larimer) Positive SARS-CoV-2 tests, April 1

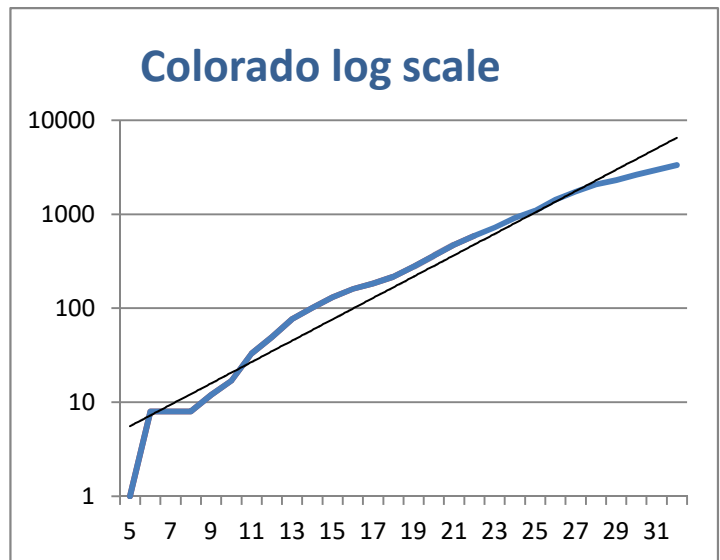
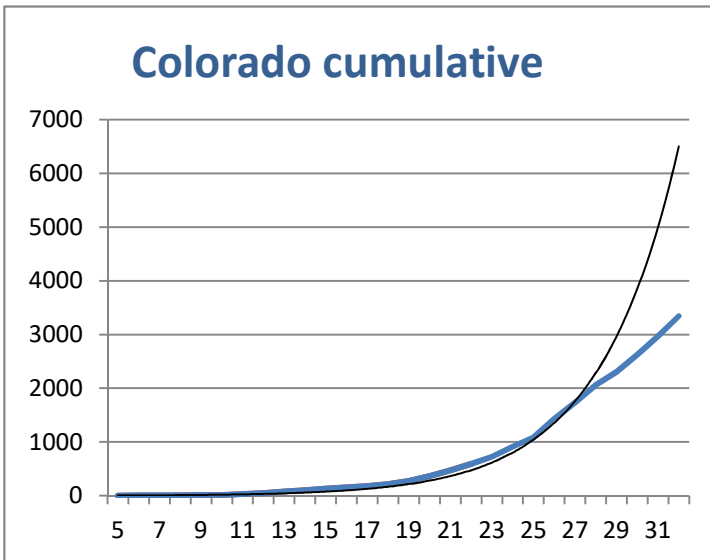
By Alan Silverstein, ajs@frii.com, Fort Collins; see comments at bottom

Derived from <https://covid19.colorado.gov/> (click down to data)

(which now includes a lot of data and graphs, but still nothing like this one)

Inspired by <https://www.youtube.com/watch?v=Kas0tIxDvrg> ("Exponential growth and epidemics")

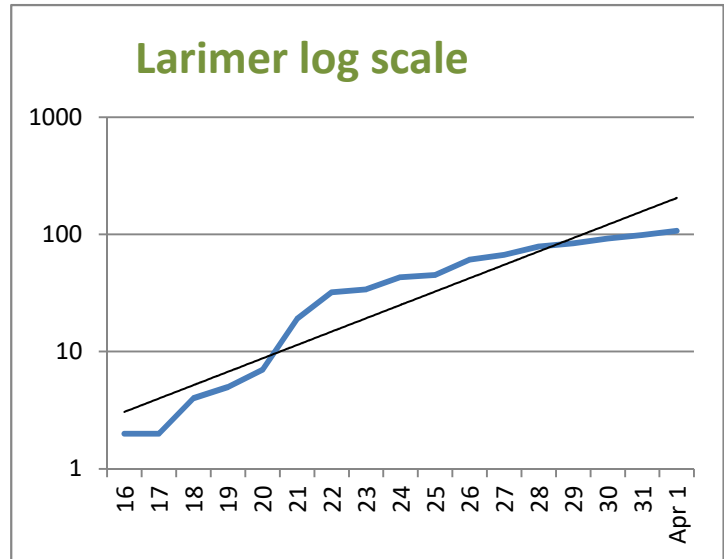
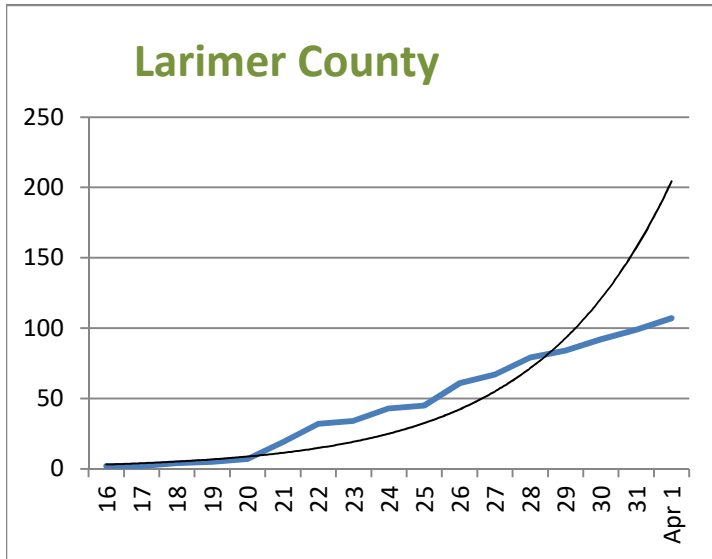
(the 9-minute video above is excellent and worth watching, explains Ratio below)



Ratio is between previous and today's **Diff**. Consistently below 1.0 good => passing inflection point.

	Colorado (above)				Larimer County (below)			
March	Count	Diff	Ratio	4d Avg	Count	Diff	Ratio	4d Avg
5	1							
6	8	7						
7	8	0	0.00					
8	8	0	na					
9	12	4	na		1			
10	17	5	1.25		1			
11	33	16	3.20		1			
12	49	16	1.00		1			
13	77	28	1.75	1.80	1			
14	101	24	0.86	1.70	1			
15	131	30	1.25	1.21 ?				
16	160	29	0.97	1.21	2			
17	183	23	0.79	0.97	2			
18	216	33	1.43	1.11	4	2		
19	277	61	1.85	1.26	5	1	0.50	
20	363	86	1.41	1.37	7	2	2.00	
21	475	112	1.30	1.50	19	12	6.00	
22	591	116	1.04	1.40	32	13	1.08	2.40

23	720	129	1.11	1.21	34	2	0.15	2.31
24	912	192	1.49	1.23	43	9	4.50	2.93
25	1086	174	0.91	1.14	45	2	0.22	1.49
26	1430	344	1.98	1.37	61	16	8.00	3.22 (note 1)
27	1734	304	0.88	1.31	67	6	0.38	3.27
28	2061	327	1.08	1.21	79	12	2.00	2.65
29	2307	246	0.75	1.17	84	5	0.42	2.70 (note 2)
30	2627	320	1.30	1.00	92	8	1.60	1.10
31	2966	339	1.06	1.05	99	7	0.88	1.22
Apr 1	3342	376	1.11	1.06	107	8	1.14	1.01



Comments:

- Note 1: CDPHE reported doing 250/day but then clearing a 2600-test backlog.
- Note 2: Larimer County ran out of test kits, with unknown effects on the curve.
- Due to scarcity of testing, we know these numbers are low, but they're all we've got... Other than hospitalization and death counts. One author (Pueyo) estimates actual cases are 800x the death rate, but this is very sensitive to assumptions for mortality rate, doubling time, and average from infection till death.
- So long as data is gathered and reported fairly consistently, the shape of the curve is meaningful.
- Major closures started March 17. Given 5-6 day average incubation + 6 day testing backlog + 1 day reporting delay, don't expect results (inflection point) until around March 30 (seems to have happened).
- Governor's slide set March 27 also suggested a 12-13 day delay from mitigation until curve flattening.
- CDPHE added a cumulative cases plot to their website, but no exponential curve fit nor log plot.