

Ro=  $n * r^{(n+1)} * (r - 1) / (r^n - 1)$   $r <> 1$     Ro =1 when r = 1     $\ln(\text{SQRT}(2))$      $\text{SQRT}(2)=$  1.414214  
n=            10 Days    10 Cases Day 0    RoC=Ro Cases Day 10            /  $\ln(1.4)$      $\text{SQRT}(3)=$  1.732051

r	Re	Re Cases Day 10	Ro Cases Day 10	Increase (RoC/10)	0.1	$r^{1.03002136}$	Ro	Ro Cases Day 10	$r^{(1.03)}/r$	$r^{(z-1)}$	Ro/Re
1.00	1.000000	10.000	10.000	1.000	1.000000	1.000000	1.000000	10.000	1.000000	1.000000	1.000000
1.01	1.066379	11.046	11.165	1.011	1.011084	1.010302	1.068425	11.079	1.000299	1.000299	1.001919
1.02	1.135531	12.190	12.471	1.023	1.022329	1.020607	1.139815	12.263	1.000595	1.000595	1.003773
1.03	1.207474	13.439	13.933	1.037	1.033725	1.030914	1.214193	13.559	1.000888	1.000888	1.005564
1.04	1.282226	14.802	15.569	1.052	1.045263	1.041225	1.291579	14.978	1.001178	1.001178	1.007294
1.05	1.359798	16.289	17.397	1.068	1.056933	1.051539	1.371988	16.529	1.001466	1.001466	1.008965
1.06	1.440200	17.908	19.439	1.085	1.068726	1.061856	1.455434	18.225	1.001751	1.001751	1.010578
1.07	1.523439	19.672	21.716	1.104	1.080633	1.072176	1.541925	20.075	1.002033	1.002033	1.012134
1.08	1.609518	21.589	24.255	1.123	1.092646	1.082498	1.631466	22.094	1.002313	1.002313	1.013636
1.09	1.698439	23.674	27.081	1.144	1.104756	1.092824	1.724061	24.294	1.002591	1.002591	1.015086
1.10	1.790199	25.937	30.225	1.165	1.116956	1.103152	1.819710	26.690	1.002865	1.002865	1.016485
1.11	1.884796	28.394	33.718	1.187	1.129239	1.113483	1.918410	29.298	1.003138	1.003138	1.017834
1.12	1.982223	31.058	37.595	1.210	1.141598	1.123817	2.020156	32.133	1.003408	1.003408	1.019137
1.13	2.082472	33.946	41.894	1.234	1.154026	1.134154	2.124940	35.214	1.003676	1.003676	1.020393
1.14	2.185534	37.072	46.657	1.259	1.166518	1.144493	2.232755	38.560	1.003941	1.003941	1.021606
1.15	2.291399	40.456	51.927	1.284	1.179069	1.154835	2.343589	42.189	1.004205	1.004205	1.022777
1.16	2.400053	44.114	57.753	1.309	1.191673	1.165180	2.457430	46.124	1.004466	1.004466	1.023907
1.17	2.511482	48.068	64.186	1.335	1.204326	1.175528	2.574264	50.388	1.004725	1.004725	1.024998
1.18	2.625673	52.338	71.283	1.362	1.217022	1.185878	2.694076	55.005	1.004981	1.004981	1.026052
1.19	2.742609	56.947	79.105	1.389	1.229760	1.196231	2.816850	60.000	1.005236	1.005236	1.027070
1.20	2.862273	61.917	87.716	1.417	1.242533	1.206586	2.942569	65.401	1.005489	1.005489	1.028053
1.21	2.984649	67.275	97.188	1.445	1.255340	1.216944	3.071216	71.237	1.005739	1.005739	1.029004
1.22	3.109719	73.046	107.597	1.473	1.268177	1.227305	3.202773	77.540	1.005988	1.005988	1.029924
1.23	3.237464	79.259	119.023	1.502	1.281041	1.237668	3.337221	84.342	1.006234	1.006234	1.030813
1.24	3.367866	85.944	131.555	1.531	1.293929	1.248034	3.474540	91.678	1.006479	1.006479	1.031674
1.25	3.500907	93.132	145.286	1.560	1.306840	1.258402	3.614713	99.585	1.006722	1.006722	1.032508
1.26	3.636567	100.857	160.319	1.590	1.319771	1.268773	3.757719	108.103	1.006962	1.006962	1.033315
1.27	3.774828	109.153	176.761	1.619	1.332719	1.279146	3.903539	117.274	1.007201	1.007201	1.034097
1.28	3.915670	118.059	194.728	1.649	1.345684	1.289521	4.052154	127.141	1.007439	1.007439	1.034856
1.29	4.059075	127.614	214.346	1.680	1.358662	1.299899	4.203545	137.752	1.007674	1.007674	1.035592
1.30	4.205025	137.858	235.746	1.710	1.371654	1.310280	4.357692	149.156	1.007908	1.007908	1.036306
1.31	4.353500	148.838	259.072	1.741	1.384656	1.320663	4.514577	161.406	1.008140	1.008140	1.037000
1.32	4.504482	160.598	284.475	1.771	1.397669	1.331048	4.674182	174.557	1.008370	1.008370	1.037674
1.33	4.657955	173.187	312.117	1.802	1.410691	1.341436	4.836488	188.668	1.008598	1.008598	1.038329
1.34	4.813899	186.659	342.173	1.833	1.423720	1.351826	5.001478	203.801	1.008825	1.008825	1.038966

$R_o = n * r^{(n+1)} * (r - 1) / (r^n - 1)$   $r < 1$        $R_o = 1$  when  $r = 1$        $\ln(\text{SQRT}(2))$        $\text{SQRT}(2) = 1.414214$   
 $n = 10$  Days      10 Cases Day 0       $R_oC = R_o$  Cases Day 10       $/ \ln(1.4)$        $\text{SQRT}(3) = 1.732051$

r	Re	Re Cases Day 10	Ro Cases Day 10	Increase (RoC/10)	0.1	1.03002136	Ro	Ro Cases Day 10	$r^{(1.03)}/r$	$r^{(z-1)}$	Ro/Re
1.35	4.972297	201.066	374.826	1.864	1.436756	1.362218	5.169133	220.022	1.009050	1.009050	1.039587
1.36	5.133134	216.466	410.274	1.895	1.449798	1.372612	5.339438	237.399	1.009274	1.009274	1.040191
1.37	5.296392	232.919	448.726	1.927	1.462844	1.383009	5.512376	256.007	1.009496	1.009496	1.040780
1.38	5.462055	250.490	490.405	1.958	1.475895	1.393408	5.687931	275.921	1.009716	1.009716	1.041354
1.39	5.630107	269.245	535.550	1.989	1.488950	1.403810	5.866086	297.223	1.009935	1.009935	1.041914
1.40	5.800534	289.255	584.412	2.020	1.502007	1.414214	6.046828	320.000	1.010153	1.010153	1.042461
1.41	5.973320	310.593	637.261	2.052	1.515067	1.424619	6.230141	344.341	1.010368	1.010368	1.042995
1.42	6.148452	333.337	694.380	2.083	1.528128	1.435028	6.416011	370.342	1.010583	1.010583	1.043517
1.43	6.325914	357.569	756.073	2.114	1.541191	1.445438	6.604426	398.102	1.010796	1.010796	1.044027
1.44	6.505695	383.376	822.661	2.146	1.554254	1.455850	6.795371	427.728	1.011007	1.011007	1.044527
1.45	6.687780	410.847	894.484	2.177	1.567318	1.466265	6.988835	459.330	1.011217	1.011217	1.045016
1.46	6.872158	440.077	971.902	2.208	1.580383	1.476682	7.184804	493.026	1.011426	1.011426	1.045495
1.47	7.058816	471.165	1,055.298	2.240	1.593447	1.487101	7.383268	528.937	1.011633	1.011633	1.045964
1.48	7.247743	504.217	1,145.076	2.271	1.606510	1.497522	7.584215	567.195	1.011839	1.011839	1.046424
1.49	7.438926	539.340	1,241.665	2.302	1.619573	1.507945	7.787635	607.933	1.012044	1.012044	1.046876
1.50	7.632357	576.650	1,345.518	2.333	1.632634	1.518371	7.993518	651.295	1.012247	1.012247	1.047320
1.51	7.828023	616.268	1,457.112	2.364	1.645695	1.528798	8.201852	697.430	1.012449	1.012449	1.047755
1.52	8.025915	658.318	1,576.955	2.395	1.658754	1.539227	8.412630	746.497	1.012650	1.012650	1.048183
1.53	8.226024	702.934	1,705.580	2.426	1.671811	1.549659	8.625842	798.659	1.012849	1.012849	1.048604
1.54	8.428340	750.252	1,843.552	2.457	1.684867	1.560092	8.841480	854.090	1.013047	1.013047	1.049018
1.55	8.632854	800.418	1,991.467	2.488	1.697920	1.570528	9.059536	912.971	1.013244	1.013244	1.049425
1.56	8.839558	853.583	2,149.953	2.519	1.710972	1.580966	9.280001	975.494	1.013440	1.013440	1.049826
1.57	9.048444	909.906	2,319.671	2.549	1.724021	1.591405	9.502868	1,041.857	1.013634	1.013634	1.050221
1.58	9.259503	969.551	2,501.322	2.580	1.737069	1.601847	9.728131	1,112.271	1.013827	1.013827	1.050610
1.59	9.472728	1,032.693	2,695.639	2.610	1.750113	1.612291	9.955782	1,186.953	1.014019	1.014019	1.050994
1.60	9.688113	1,099.512	2,903.398	2.641	1.763156	1.622736	10.185815	1,266.133	1.014210	1.014210	1.051372
1.61	9.905649	1,170.196	3,125.414	2.671	1.776195	1.633184	10.418225	1,350.053	1.014400	1.014400	1.051746
1.62	10.125332	1,244.945	3,362.547	2.701	1.789233	1.643633	10.653005	1,438.962	1.014588	1.014588	1.052114
1.63	10.347153	1,323.964	3,615.698	2.731	1.802267	1.654085	10.890149	1,533.125	1.014776	1.014776	1.052478
1.64	10.571107	1,407.468	3,885.817	2.761	1.815299	1.664538	11.129653	1,632.817	1.014962	1.014962	1.052837
1.65	10.797189	1,495.683	4,173.902	2.791	1.828328	1.674993	11.371512	1,738.325	1.015148	1.015148	1.053192
1.66	11.025393	1,588.843	4,481.002	2.820	1.841355	1.685451	11.615721	1,849.951	1.015332	1.015332	1.053543
1.67	11.255713	1,687.193	4,808.218	2.850	1.854379	1.695910	11.862275	1,968.010	1.015515	1.015515	1.053889
1.68	11.488144	1,790.989	5,156.707	2.879	1.867400	1.706371	12.111171	2,092.829	1.015697	1.015697	1.054232
1.69	11.722682	1,900.496	5,527.682	2.909	1.880418	1.716833	12.362405	2,224.753	1.015878	1.015878	1.054571

Ro=  $n * r^{(n+1)} * (r - 1) / (r^n - 1)$   $r < > 1$     Ro =1 when r = 1    ln(SQRT(2))    SQRT(2)= 1.414214  
n= 10 Days    10 Cases Day 0    RoC=Ro Cases Day 10    / ln(1.4)    SQRT(3)= 1.732051

r	Re	Re Cases Day 10	Ro Cases Day 10	Increase (RoC/10)	0.1	1.03002136	Ro	Ro Cases Day 10	$r^{(1.03)}/r$	$r^{(z-1)}$	Ro/Re
1.70	11.959322	2,015.994	5,922.418	2.938	1.893433	1.727298	12.615972	2,364.140	1.016058	1.016058	1.054907
1.71	12.198060	2,137.771	6,342.250	2.967	1.906445	1.737765	12.871869	2,511.364	1.016237	1.016237	1.055239
1.72	12.438890	2,266.128	6,788.580	2.996	1.919455	1.748233	13.130093	2,666.818	1.016415	1.016415	1.055568
1.73	12.681810	2,401.381	7,262.875	3.024	1.932462	1.758703	13.390641	2,830.908	1.016591	1.016591	1.055893
1.74	12.926816	2,543.856	7,766.675	3.053	1.945465	1.769175	13.653509	3,004.060	1.016767	1.016767	1.056216
1.75	13.173903	2,693.894	8,301.591	3.082	1.958466	1.779649	13.918696	3,186.719	1.016942	1.016942	1.056535
1.76	13.423068	2,851.850	8,869.312	3.110	1.971465	1.790125	14.186197	3,379.348	1.017116	1.017116	1.056852
1.77	13.674308	3,018.093	9,471.605	3.138	1.984460	1.800602	14.456012	3,582.429	1.017289	1.017289	1.057166
1.78	13.927619	3,193.008	10,110.319	3.166	1.997453	1.811081	14.728137	3,796.466	1.017461	1.017461	1.057477
1.79	14.182999	3,376.994	10,787.389	3.194	2.010442	1.821562	15.002570	4,021.983	1.017633	1.017633	1.057785
1.80	14.440444	3,570.467	11,504.839	3.222	2.023429	1.832045	15.279309	4,259.527	1.017803	1.017803	1.058091
1.81	14.699952	3,773.860	12,264.785	3.250	2.036414	1.842529	15.558353	4,509.666	1.017972	1.017972	1.058395
1.82	14.961520	3,987.621	13,069.439	3.278	2.049395	1.853016	15.839699	4,772.994	1.018140	1.018140	1.058696
1.83	15.225145	4,212.219	13,921.113	3.305	2.062374	1.863504	16.123346	5,050.127	1.018308	1.018308	1.058995
1.84	15.490825	4,448.138	14,822.221	3.332	2.075350	1.873993	16.409293	5,341.708	1.018475	1.018475	1.059291
1.85	15.758558	4,695.883	15,775.286	3.359	2.088323	1.884485	16.697537	5,648.405	1.018640	1.018640	1.059585
1.86	16.028341	4,955.979	16,782.942	3.386	2.101294	1.894978	16.988077	5,970.915	1.018805	1.018805	1.059877
1.87	16.300173	5,228.969	17,847.937	3.413	2.114262	1.905472	17.280913	6,309.960	1.018969	1.018969	1.060167
1.88	16.574050	5,515.419	18,973.140	3.440	2.127227	1.915969	17.576043	6,666.293	1.019132	1.019132	1.060456
1.89	16.849972	5,815.915	20,161.545	3.467	2.140190	1.926467	17.873466	7,040.697	1.019295	1.019295	1.060742
1.90	17.127936	6,131.066	21,416.273	3.493	2.153151	1.936967	18.173180	7,433.984	1.019456	1.019456	1.061026
1.91	17.407941	6,461.505	22,740.579	3.519	2.166108	1.947468	18.475186	7,847.001	1.019617	1.019617	1.061308
1.92	17.689985	6,807.886	24,137.857	3.546	2.179063	1.957971	18.779481	8,280.626	1.019777	1.019777	1.061588
1.93	17.974065	7,170.890	25,611.643	3.572	2.192016	1.968476	19.086066	8,735.772	1.019936	1.019936	1.061867
1.94	18.260182	7,551.223	27,165.623	3.598	2.204966	1.978982	19.394940	9,213.386	1.020094	1.020094	1.062144
1.95	18.548332	7,949.615	28,803.636	3.623	2.217914	1.989490	19.706101	9,714.455	1.020251	1.020251	1.062419
1.96	18.838516	8,366.826	30,529.679	3.649	2.230860	2.000000	20.019550	10,240.000	1.020408	1.020408	1.062693
1.97	19.130730	8,803.640	32,347.915	3.674	2.243803	2.010511	20.335286	10,791.083	1.020564	1.020564	1.062964
1.98	19.424975	9,260.872	34,262.677	3.700	2.256743	2.021024	20.653308	11,368.805	1.020719	1.020719	1.063235
1.99	19.721249	9,739.368	36,278.475	3.725	2.269681	2.031538	20.973617	11,974.311	1.020874	1.020874	1.063503
2.00	20.019550	10,240.000	38,400.000	3.750	2.282617	2.042054	21.296210	12,608.785	1.021027	1.021027	1.063771
2.01	20.319878	10,763.675	40,632.134	3.775	2.295551	2.052572	21.621089	13,273.460	1.021180	1.021180	1.064036

$Ro = n * r^{(n+1)} * (r - 1) / (r^n - 1)$   $r <> 1$        $Ro = 1$  when  $r = 1$        $\ln(\text{SQRT}(2))$        $\text{SQRT}(2) = 1.414214$   
 $n =$       10 Days      10 Cases Day 0       $RoC = Ro$  Cases Day 10       $/ \ln(1.4)$        $\text{SQRT}(3) = 1.732051$

		Re Cases	Ro Cases		0.1	1.03002136		Ro Cases				
r	Re	Day 10	Day 10	Increase	(RoC/10)	$r^{1.030021}$	Ro	Day 10	$r^{(1.03)/r}$	$r^{(z-1)}$	Ro/Re	
1.40000	5.800534	260.329	525.971	2.020	1.486265	1.414214	6.046828	320.000	1.010153	1.010153	1.042461	
1.41421	6.046828	320.000	660.791	2.065	1.520570	1.429005	6.308148	355.089	1.010459	1.010459	1.043216	
1.73205	12.731887	2,430.000	7,363.738	3.030	1.935129	1.760851	13.444361	2,865.665	1.016628	1.016628	1.055960	
1.90867	17.370499	6,416.551	22,559.909	3.516	2.164381	1.946068	18.434796	7,790.775	1.019595	1.019595	1.061270	