```
                                        First-Order↙
Norm of
 Iteration  Func-count     Residual       optimality      Lambda↙
step
     0           4       0.0692469           0.311         0.01
     1           8      5.52396e-05          0.0158        0.001↙
0.243724
     2          12      3.08449e-10        3.26e-05       0.0001↙
0.00570555
     3          16       2.5348e-18         1.2e-09        1e-05↙
1.51444e-05
     4          20      3.18543e-28        1.24e-14        1e-06↙
1.68842e-09

Equation solved.

fsolve completed because the vector of function values is near zero
as measured by the value of the function tolerance, and
the problem appears regular as measured by the gradient.

<stopping criteria details>
Max. abs. error in calibration targets:1.4017e-14


pis1 =

   7.8408e-08


pis2 =

   1.2442e-04


pis3 =

    0.3902


RnotSIR =

    1.5035
```

Iteration	Func-count	Residual	First-Order optimality	Lambda	Norm of step
0	1751	6.76588e+06	2.2e+04	0.01	
1	3502	138619	4.41e+03	0.001	101.515
2	5253	311.558	622	0.0001	10.4794
3	7004	0.00279104	1.78	1e-05	0.840124
4	8756	0.00110652	0.085	0.0001	0.747265
5	10507	0.000994513	0.0775	1e-05	0.711856
6	12259	0.000893531	0.0703	0.0001	0.677899
7	14010	0.000802499	0.0638	1e-05	0.645243
8	15762	0.000720497	0.0578	0.0001	0.61393
9	17513	0.000646646	0.0523	1e-05	0.583942
10	19265	0.000580165	0.0472	0.0001	0.555181
11	21016	0.000520356	0.0427	1e-05	0.527633
12	22768	0.000466563	0.0386	0.0001	0.50129
13	24519	0.000418204	0.0348	1e-05	0.476127
14	26271	0.000374743	0.0314	0.0001	0.452042
15	28022	0.000335702	0.0283	1e-05	0.429071
16	29774	0.000300643	0.0255	0.0001	0.407157
17	31525	0.000269171	0.0229	1e-05	0.386204
18	33277	0.00024093	0.0206	0.0001	0.366266
19	35028	0.000215596	0.0185	1e-05	0.347251

```
    20       36780     0.000192879          0.0167       0.0001↙
0.329135
    21       38531     0.000172515          0.0149        1e-05↙
0.311898
    22       40283     0.000154265          0.0134       0.0001↙
0.295495
    23       42034     0.000137915           0.012        1e-05↙
0.279891
    24       43786     0.000123271          0.0108       0.0001↙
0.265042
    25       45537      0.00011016         0.00967        1e-05↙
0.250946
    26       47289     9.84232e-05         0.00866       0.0001↙
0.237556
    27       49040     8.79208e-05         0.00775        1e-05↙
0.224822
    28       50792     7.85246e-05         0.00693       0.0001↙
0.212746
    29       52543     7.01206e-05         0.00622        1e-05↙
0.201283
    30       54295     6.26055e-05         0.00556       0.0001↙
0.19041
    31       56046     5.58869e-05         0.00497        1e-05↙
0.180088
    32       57798     4.98819e-05         0.00444       0.0001↙
0.170311
    33       59549     4.45158e-05         0.00396        1e-05↙
0.161036
    34       61301     3.97214e-05         0.00354       0.0001↙
0.152251
    35       63052     3.54388e-05         0.00317        1e-05↙
0.143928
    36       64804     3.16139e-05         0.00283       0.0001↙
0.136043
    37       66555     2.81986e-05         0.00252        1e-05↙
0.128576
    38       68307     2.51494e-05         0.00224       0.0001↙
0.121509
    39       70058     2.24277e-05         0.00201        1e-05↙
0.114816
    40       71810     1.99985e-05         0.00179       0.0001↙
0.108482
    41       73561     1.78308e-05          0.0016        1e-05↙
0.102487
```

```
    42       75313     1.58967e-05         0.00142       0.0001↙
0.0968156
    43       77064     1.41711e-05         0.00127        1e-05↙
0.0914574
    44       78816     1.26319e-05         0.00113       0.0001↙
0.0863895
    45       80567      1.1259e-05           0.001        1e-05↙
0.0815874
    46       82319     1.00347e-05        0.000897       0.0001↙
0.0770516
    47       84070     8.94299e-06        0.000798        1e-05↙
0.0727668
    48       85822     7.96955e-06        0.000712       0.0001↙
0.068715
    49       87573     7.10166e-06        0.000634        1e-05↙
0.0648849
    50       89324     7.02367e-06          0.0248        1e-06↙
0.40721
    51       91076     1.75587e-06         0.00968        1e-05↙
0.25558
    52       92827     5.32542e-07         0.00377        1e-06↙
0.160225
    53       94578     4.41762e-07         0.00759        1e-07↙
0.230275
    54       96329     3.19046e-10        0.000198        1e-08↙
0.0379174
    55       98080     3.17073e-17        7.36e-08        1e-09↙
0.000634713

Equation solved.

fsolve completed because the vector of function values is near zero
as measured by the value of the function tolerance, and
the problem appears regular as measured by the gradient.

<stopping criteria details>
Equation solved. First Order Optimality is Small
Max. abs. error in equilib. equations:1.4911e-09


aggCons_trough_percent =

  -27.6173
```

```
aggCons_avg_first_year_percent =

  -16.8352


terminal_one_minus_susceptibles_percent =

   43.0267


peak_infection_percent =

    3.1848


terminal_death_share_percent =

    0.2151


terminal_number_deaths_US_millions =

    0.7099

Elapsed time is 218.118847 seconds.
>>
```