

Euler's method for $y' = ky$ with $y(0) = y_0$

Step	t	y	dy
0	0.0	100.00	2.0000
1	0.1	102.00	2.0400
2	0.2	104.04	2.0808
3	0.3	106.12	2.1224
4	0.4	108.24	2.1649
5	0.5	110.41	2.2082
6	0.6	112.62	2.2523
7	0.7	114.87	2.2974
8	0.8	117.17	2.3433
9	0.9	119.51	2.3902
10	1.0	121.90	2.4380
11	1.1	124.34	2.4867
12	1.2	126.82	2.5365
13	1.3	129.36	2.5872
14	1.4	131.95	2.6390
15	1.5	134.59	2.6917
16	1.6	137.28	2.7456
17	1.7	140.02	2.8005
18	1.8	142.82	2.8565
19	1.9	145.68	2.9136
20	2.0	148.59	2.9719
21	2.1	151.57	3.0313
22	2.2	154.60	3.0920
23	2.3	157.69	3.1538
24	2.4	160.84	3.2169
25	2.5	164.06	3.2812
26	2.6	167.34	3.3468
27	2.7	170.69	3.4138
28	2.8	174.10	3.4820
29	2.9	177.58	3.5517
30	3.0	181.14	3.6227
31	3.1	184.76	3.6952
32	3.2	188.45	3.7691
33	3.3	192.22	3.8445
34	3.4	196.07	3.9214
35	3.5	199.99	3.9998
36	3.6	203.99	4.0798
37	3.7	208.07	4.1614
38	3.8	212.23	4.2446
39	3.9	216.47	4.3295
40	4.0	220.80	4.4161
41	4.1	225.22	4.5044
42	4.2	229.72	4.5945
43	4.3	234.32	4.6864
44	4.4	239.01	4.7801
45	4.5	243.79	4.8757
46	4.6	248.66	4.9732
47	4.7	253.63	5.0727
48	4.8	258.71	5.1741
49	4.9	263.88	5.2776
50	5.0	269.16	5.3832

k= 0.2
y0= 100
dt= 0.1

