	t	Euler Approximation	Exact Solution	Absolute Error
0	1.0	0.000000	0.000000	0.000000
1	1.1	0.100000	0.105160	0.005160
2	1.2	0.209917	0.221243	0.011325
3	1.3	0.330471	0.349121	0.018651
4	1.4	0.462354	0.489682	0.027328
5	1.5	0.606285	0.643875	0.037590
6	1.6	0.763041	0.812753	0.049711
7	1.7	0.933475	0.997494	0.064019
8	1.8	1.118537	1.199439	0.080902
9	1.9	1.319293	1.420116	0.100823
10	2.0	1.536943	1.661282	0.124338

	t	Taylor Order 2 Approx	Exact Solution	Absolute Error
0	1.0	0.000000	0.000000	0.000000
1	1.1	0.105000	0.105160	0.000160
2	1.2	0.220919	0.221243	0.000324
3	1.3	0.348612	0.349121	0.000509
4	1.4	0.488954	0.489682	0.000728
5	1.5	0.642883	0.643875	0.000993
6	1.6	0.811438	0.812753	0.001315
7	1.7	0.995787	0.997494	0.001707
8	1.8	1.197252	1.199439	0.002187
9	1.9	1.417344	1.420116	0.002772
10	2.0	1.657795	1.661282	0.003487

```
結果 for h = 0.05:
      t u1 (RK4)
                   u1 (exact) u1 error u2 (RK4) u2 (exact)
                                                                 u2 error
         1.333333
                     1.333333
                              0.000000
                                       0.666667
                                                   0.666667
                                                             1.110223e-16
   0.05 1.721880
                              0.190178 -0.499599
                                                   -0.909077
                     1.912059
                                                             4.094772e-01
   0.10 1.726915
                     1.793063
                              0.066148 -0.832598
                                                   -1.032002
                                                             1.994047e-01
                     1.601967
                              0.015194 -0.890373
                                                   -0.961459
3
   0.15 1.617161
                                                              7.108572e-02
                              0.057785 -0.861042
4
   0.20
        1.481687
                     1.423902
                                                   -0.874681
                                                              1.363894e-02
   0.25 1.348945
                     1.267646
                              0.081299 -0.807505
                                                   -0.795221
                                                             1.228376e-02
                     1.423902 0.057785 -0.861042
4
   0.20 1.481687
                                                   -0.874681 1.363894e-02
   0.20 1.481687
                     1.423902
                              0.057785 -0.861042
                                                   -0.874681
                                                             1.363894e-02
                              0.081299 -0.807505
                                                   -0.795221
                                                              1.228376e-02
5
   0.25 1.348945
                     1.267646
                              0.095487 -0.750341
6
   0.30 1.227063
                     1.131577
                                                   -0.724999
                                                              2.534206e-02
                                                             3.282629e-02
   0.35 1.117478
                     1.012999 0.104480 -0.695886
                                                   -0.663060
                                                   -0.874681
                     1.423902
                              0.057785 -0.861042
   0.20 1.481687
                                                              1.363894e-02
   0.25 1.348945
                     1.267646 0.081299 -0.807505
                                                   -0.795221
                                                             1.228376e-02
5
                     1.131577
                                                   -0.724999
                              0.095487 -0.750341
   0.30 1.227063
                                                              2.534206e-02
   0.20 1.481687
                     1.423902 0.057785 -0.861042
                                                   -0.874681 1.363894e-02
4
   0.25 1.348945
                     1.267646
                              0.081299 -0.807505
                                                   -0.795221
                                                              1.228376e-02
   0.20 1.481687
                     1.423902
                              0.057785 -0.861042
                                                   -0.874681
                                                             1.363894e-02
                     1.423902
   0.20 1.481687
                              0.057785 -0.861042
                                                   -0.874681
                                                             1.363894e-02
   0.20 1.481687
                     1.423902
                              0.057785 -0.861042
                                                   -0.874681 1.363894e-02
4
4
   0.20
        1.481687
                     1.423902
                              0.057785 -0.861042
                                                   -0.874681
                                                              1.363894e-02
   0.25 1.348945
                     1.267646 0.081299 -0.807505
                                                   -0.795221
                                                             1.228376e-02
1
   0.20 1.481687
                     1.423902 0.057785 -0.861042
                                                   -0.874681 1.363894e-02
4
   0.20 1.481687
                     1.423902
                              0.057785 -0.861042
                                                   -0.874681 1.363894e-02
                     1.267646
                              0.081299 -0.807505
5
   0.25 1.348945
                                                   -0.795221
                                                              1.228376e-02
   0.30 1.227063
                     1.131577
                              0.095487 -0.750341
                                                   -0.724999
                                                             2.534206e-02
6
                     1.012999 0.104480 -0.695886
                                                   -0.663060 3.282629e-02
   0.35 1.117478
                     0.909409
   0.40 1.019525
                              0.110117 -0.645732
                                                   -0.608214
                                                             3.751755e-02
                     0.818630 0.113347 -0.599934
   0.45 0.931977
                                                   -0.559389
                                                             4.054499e-02
   0.50 0.853541
                     0.738788 0.114753 -0.558092
                                                   -0.515658
                                                             4.243482e-02
11 0.55 0.783017
                     0.668275 0.114743 -0.519706
                                                   -0.476225 4.348152e-02
   0.60 0.719337
12
                     0.605710
                              0.113627 -0.484290
                                                   -0.440411
                                                             4.387955e-02
   0.65 0.661560
                     0.549909 0.111651 -0.451407
                                                   -0.407635 4.377172e-02
13
   0.70 0.608868
                     0.499860 0.109007 -0.420673
                                                   -0.377404 4.326880e-02
                                                   -0.349296
15
   0.75 0.560547
                     0.454695 0.105852 -0.391754
                                                             4.245857e-02
16
   0.80
         0.515980
                     0.413671
                              0.102309 -0.364365
                                                   -0.322954
                                                             4.141116e-02
17
   0.85 0.474633
                     0.376158
                              0.098475 -0.338259
                                                   -0.298076
                                                             4.018254e-02
                                                   -0.274409
18 0.90 0.436043
                     0.341614 0.094428 -0.313226
                                                             3.881727e-02
   0.95 0.399812
                     0.309583 0.090229 -0.289089
                                                   -0.251739
                                                             3.735057e-02
19
   1.00 0.365600
                                                   -0.229888 3.581015e-02
                     0.279675 0.085925 -0.265698
結果 for h = 0.1:
           u1 (RK4) u1 (exact)
                                                   u2 (RK4) u2 (exact)
     t
                                     u1 error
                                                                            u2 error
   0.0 1.333333e+00
                      1.333333 0.000000e+00 6.666667e-01
                                                             0.666667 1.110223e-16
   0.1 -3.052437e+00
                        1.793063 4.845500e+00 8.989305e+00
                                                              -1.032002 1.002131e+01
                       1.423902 2.527170e+01 5.119270e+01
                                                              -0.874681 5.206739e+01
2
   0.2 -2.384779e+01
                                                              -0.724999
   0.3 -1.301652e+02
                        1.131577
                                 1.312968e+02 2.692692e+02
                                                                        2.699942e+02
                                 6.811409e+02 1.399369e+03
                                                              -0.608214 1.399977e+03
                        0.909409
   0.4 -6.802315e+02
4
   0.5 -3.531300e+03
                        0.738788 3.532038e+03 7.258242e+03
                                                              -0.515658 7.258757e+03
   0.6 -1.831280e+04
                        0.605710 1.831340e+04 3.763496e+04
                                                              -0.440411 3.763540e+04
6
   0.7 -9.495133e+04
                        0.499860
                                 9.495183e+04
                                               1.951319e+05
                                                              -0.377404
                                                                        1.951322e+05
   0.8 -4.923065e+05
                        0.413671 4.923069e+05 1.011722e+06
                                                              -0.322954 1.011722e+06
   0.9 -2.552514e+06
                        0.341614 2.552514e+06 5.245579e+06
                                                              -0.274409 5.245579e+06
```

0.279675 1.323428e+07 2.719729e+07

-0.229888 2.719729e+07

1.0 -1.323428e+07