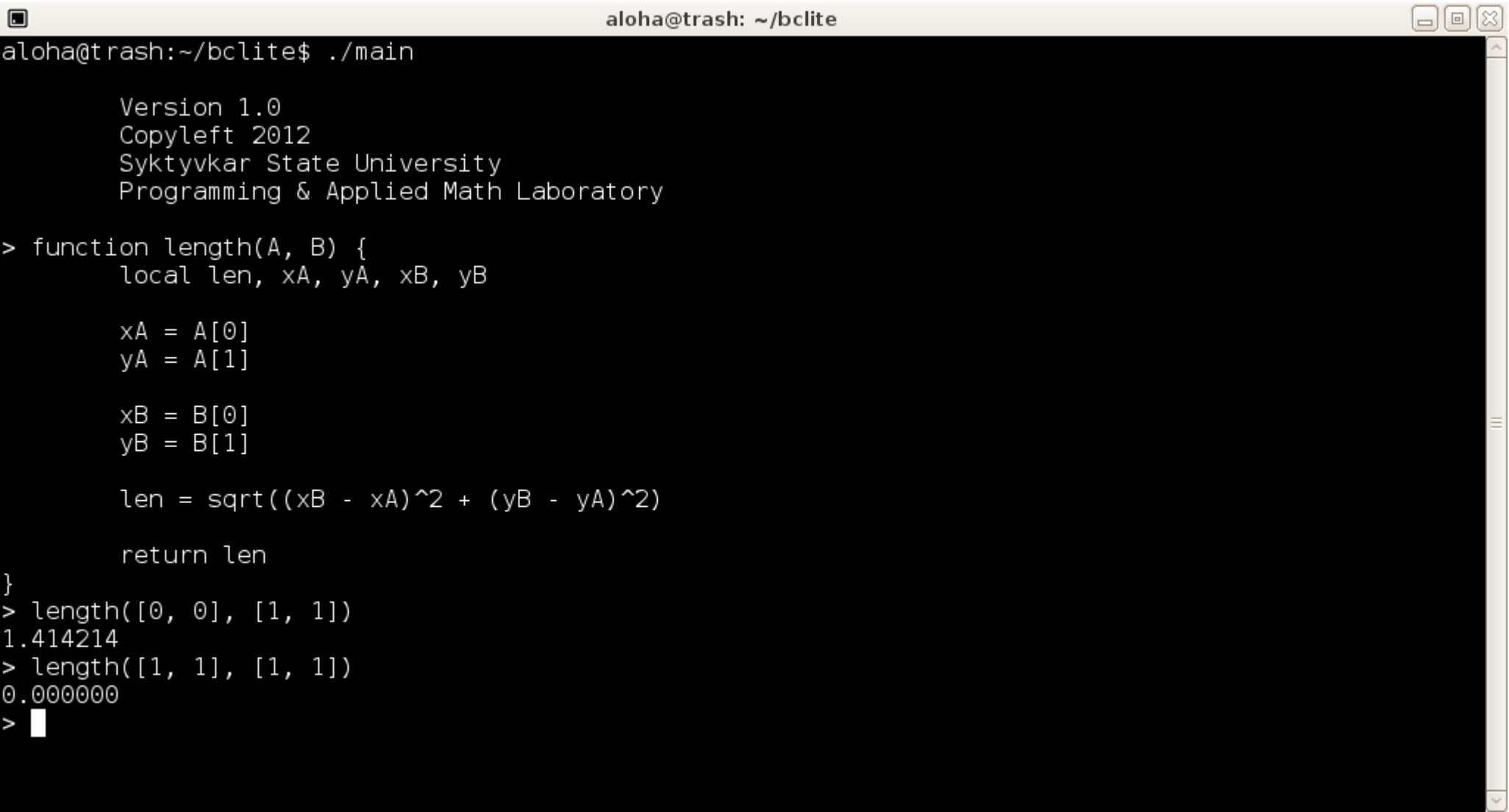

aloha@trash: ~/bclite
aloha@trash:~/bclite$ ./main
Version 1.0
Copyleft 2012
Syktyvkar State University
Programming & Applied Math Laboratory
> function length(A, B) {
local len, xA, yA, xB, yB
xA = A[0]
yA = A[1]
xB = B[0]
yB = B[1]
len = sqrt((xB - xA)^2 + (yB - yA)^2)
return len
}
> length([0, 0], [1, 1])
1.414214
> length([1, 1], [1, 1])
0.000000
>

```
> function factorial(x) {
        local i, res

        i = 1
        res = 1

        if (x == 0.0) {
                return 1
        }

        while (i <= x) {
                res = res*i
                i = i + 1
        }

        return res
}
>
>
>
>
>
> n = 4
> factorial(n)
24.000000
> factorial(0)
1.000000
```


aloha@trash: ~/bclite
>
>
> A = [1, 3; 0, 1]
> b = [3, 1]
> x = b / A
> x
0.000000
1.000000
> A*x
3.000000
1.000000
> b
3.000000
1.000000
> A
1.000000 3.000000
0.000000 1.000000
>
>
>
>
>
>
>
>
>
>
>

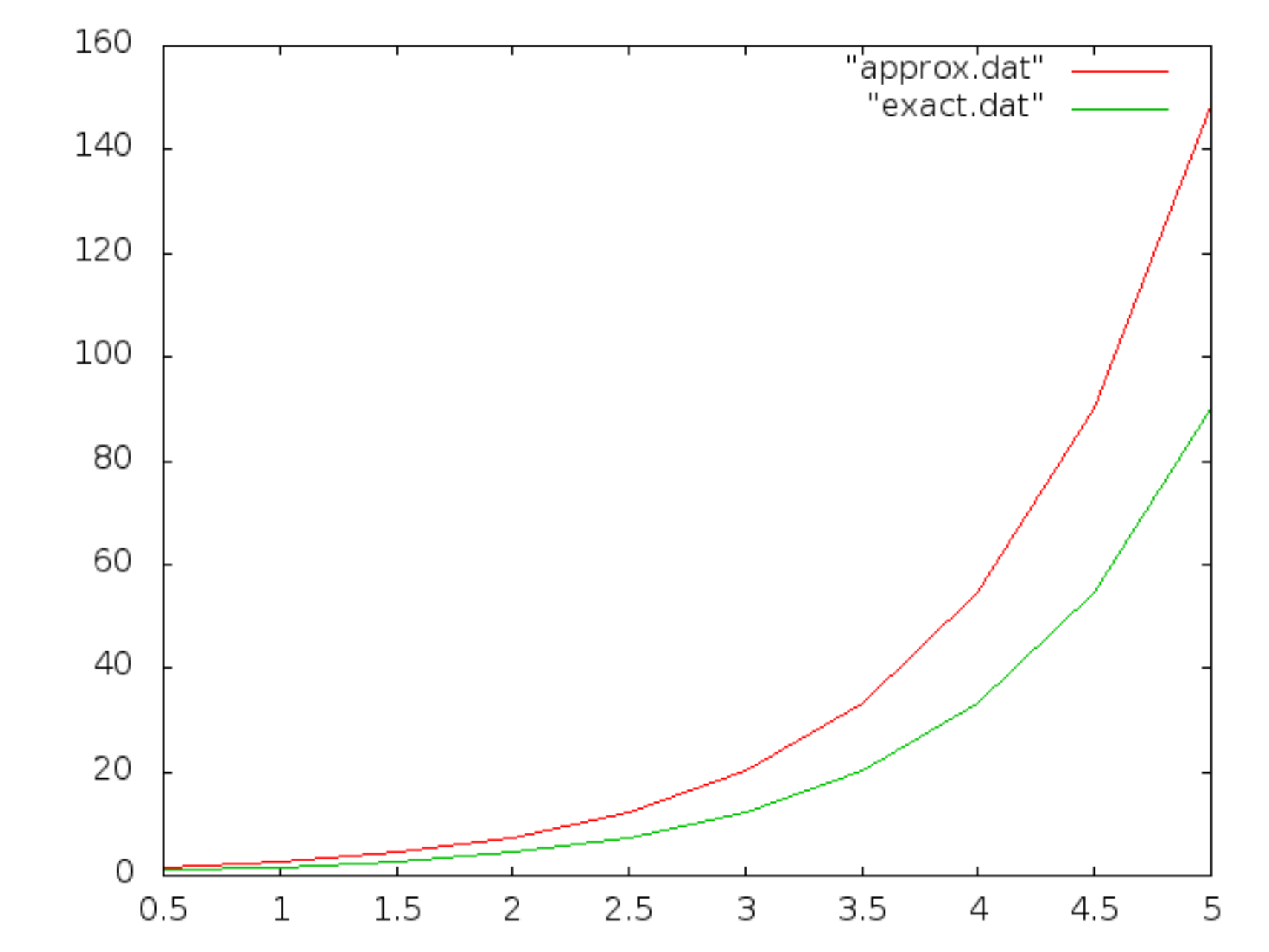
RK4.bc (~/bclite/test) - GVIM3

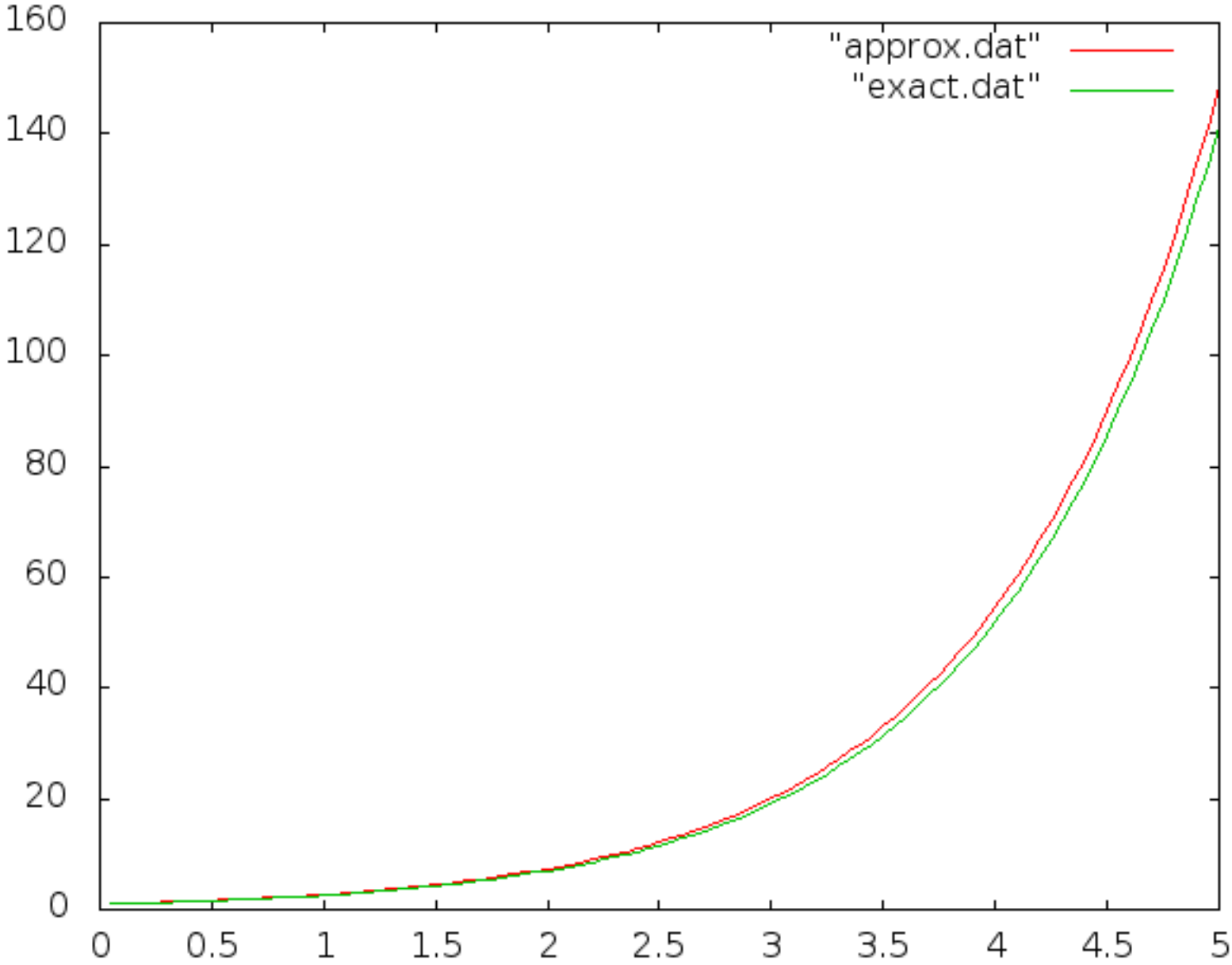
Файл Правка Инструменты Синтаксис Буферы Окно Справка

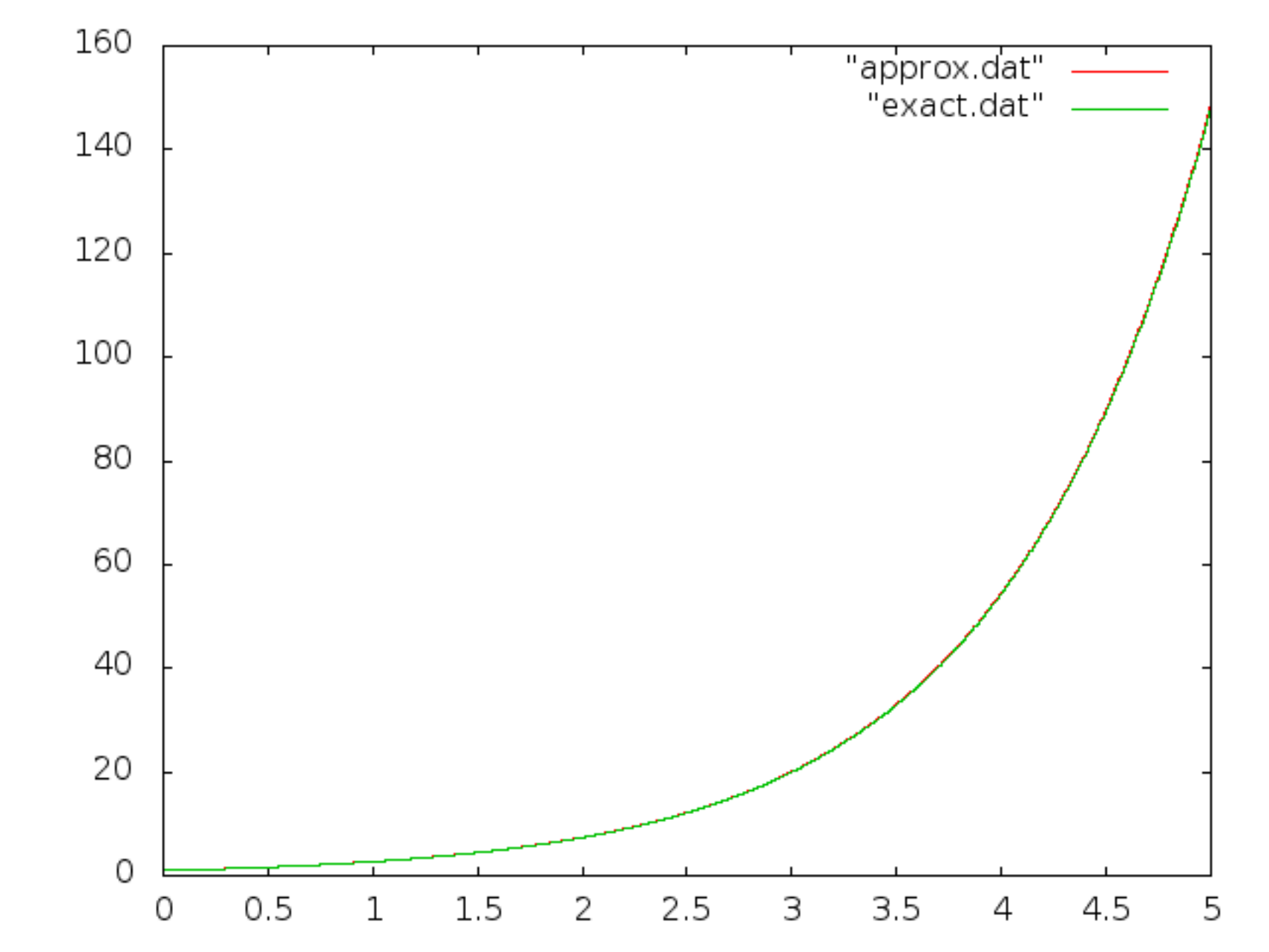
```
15 len = (tn - t0) / h
16 y = vector(len)
17 t = vector(len)
18 dy = vector(len)
19
20
21 for (i = 0; i < len; i = i + 1) {
22         k1 = h*f(t0, y0)
23         k2 = h*f(t0 + 0.5*h, y0 + 0.5*k1)
24         k3 = h*f(t0 + 0.5*h, y0 + 0.5*k2)
25         k4 = h*f(t0 + h, y0 + k3)
26
27         yn = y0 + 1/6*(k1 + 2*k2 + 2*k3 + k4)
28
29         s = solve(t0)
30
31         t0 = t0 + h
32         y0 = yn
33
34         dy[i] = yn
35         y[i]  = s
36         t[i]  = t0
37 }
38
39 "t"
40 t
```

-- ВСТАВКА -- 16,8 63%

aloha@trash: ~/bclite/test
aloha@trash:~/bclite/test$ ../main RK4.bc
t
1.000000
2.000000
3.000000
4.000000
5.000000
_
dy
2.718861
7.391210
20.091972
54.616221
148.462860
_
y
1.000000
2.718282
7.389056
20.085537
54.598150
_
aloha@trash:~/bclite/test$


"approx.dat"
"exact.dat"
160
140
120
100
80
60
40
20
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5


"approx.dat"
"exact.dat"
160
140
120
100
80
60
40
20
0
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5


"approx.dat"
"exact.dat"
160
140
120
100
80
60
40
20
0
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5