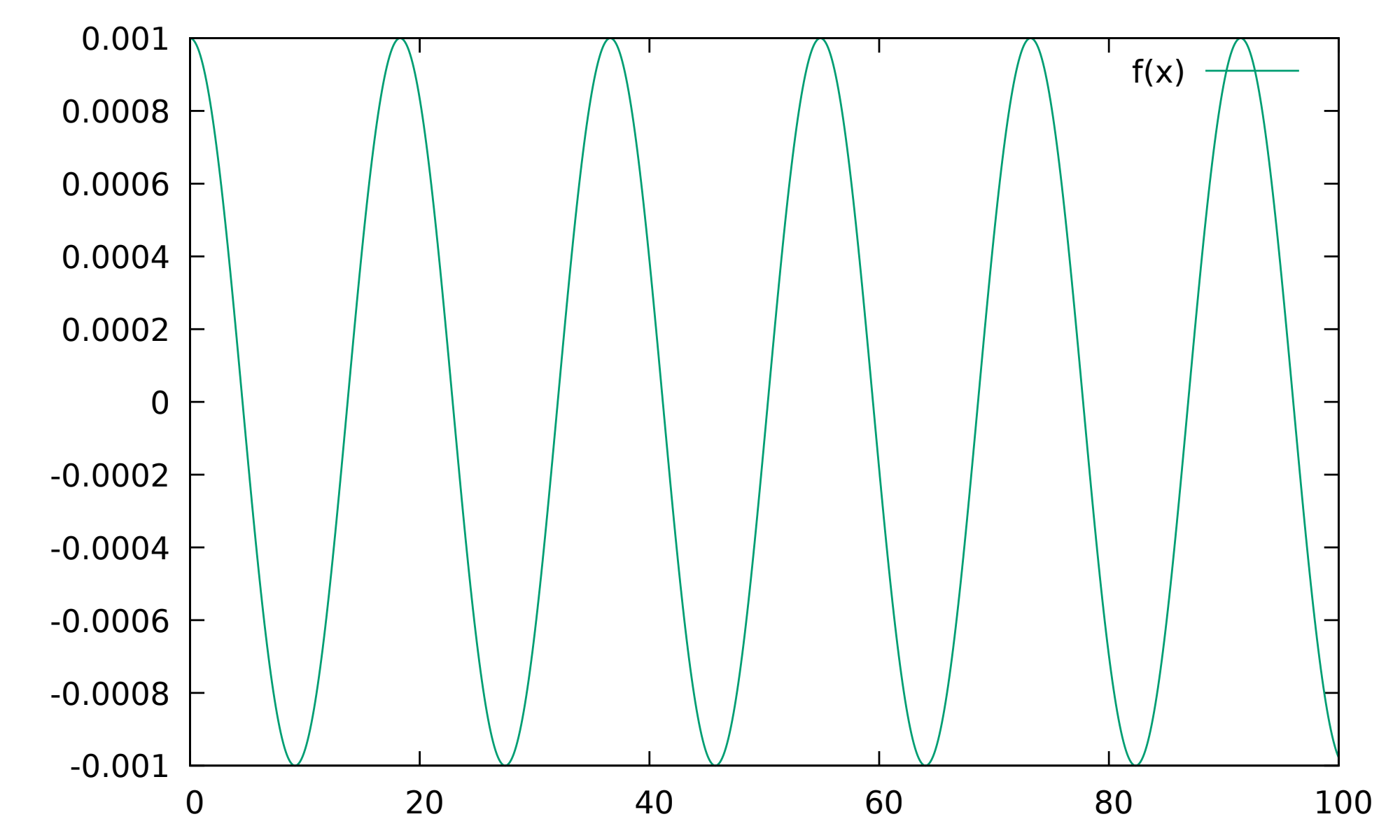
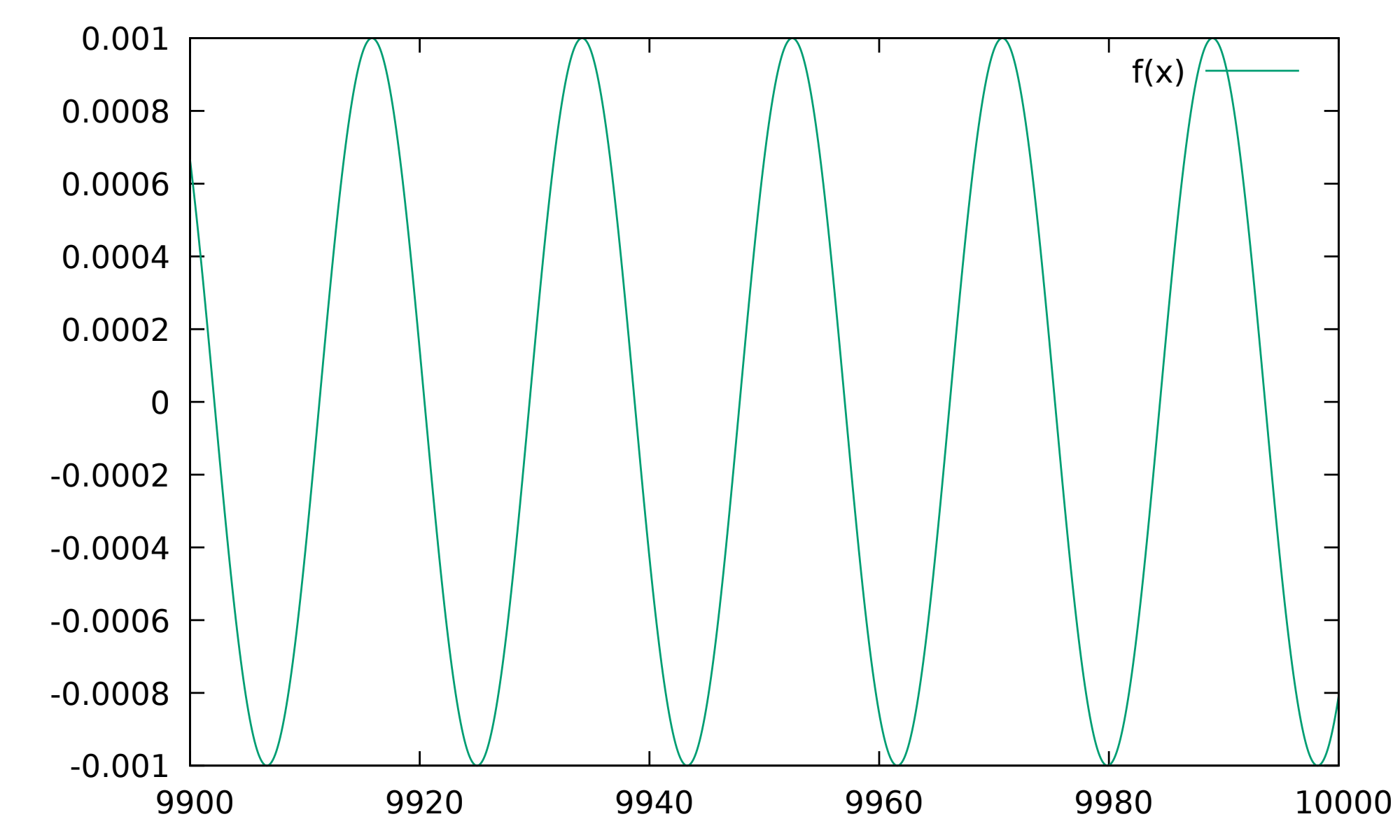
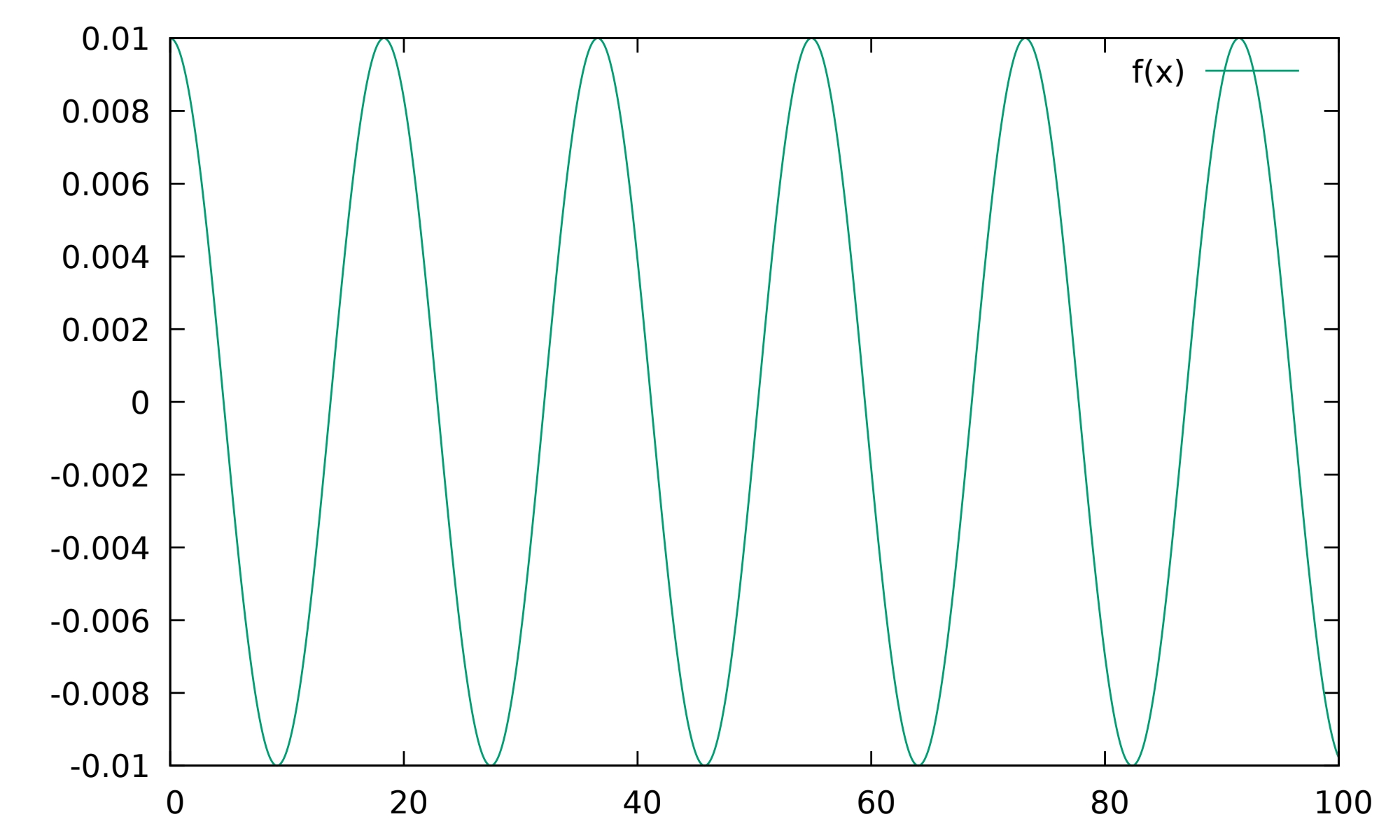
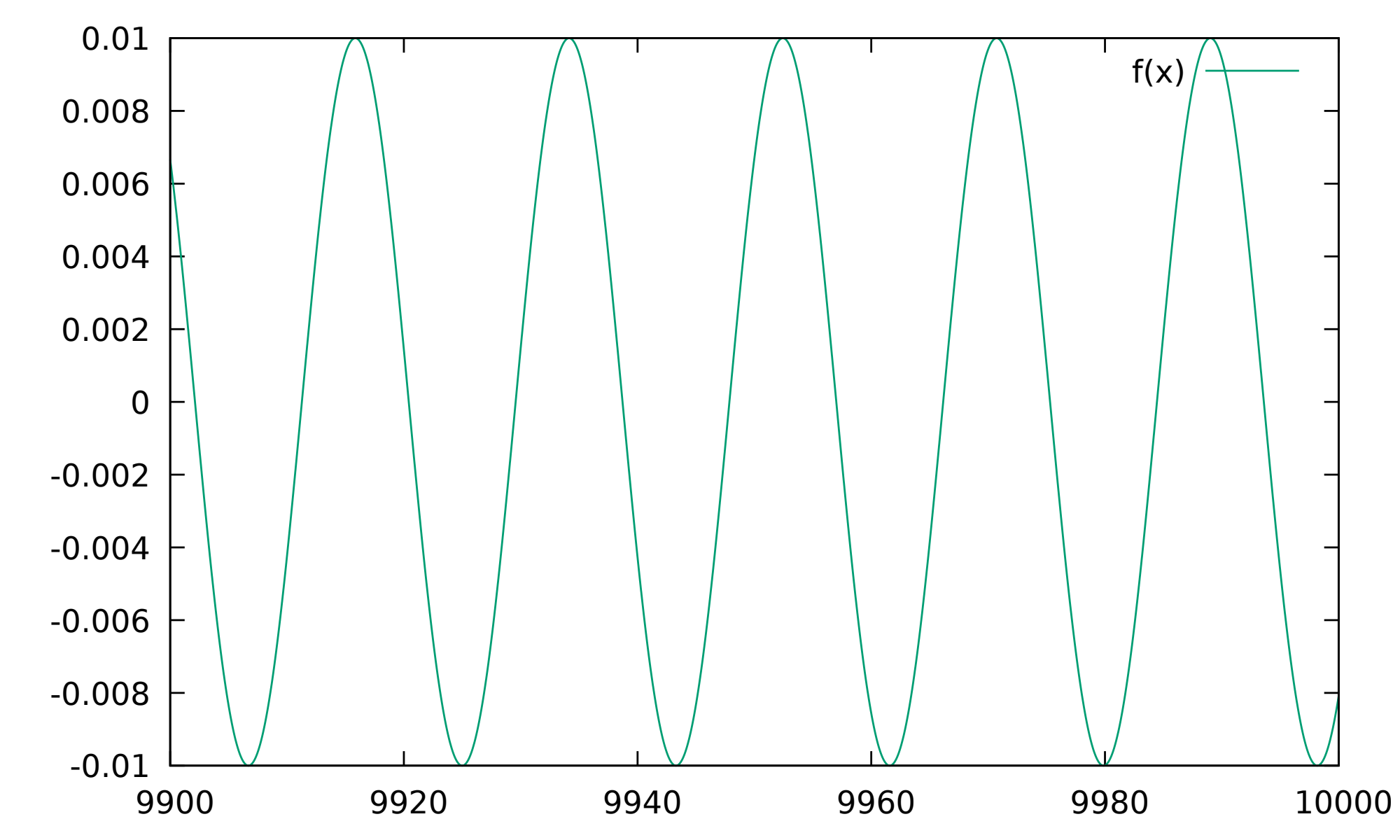
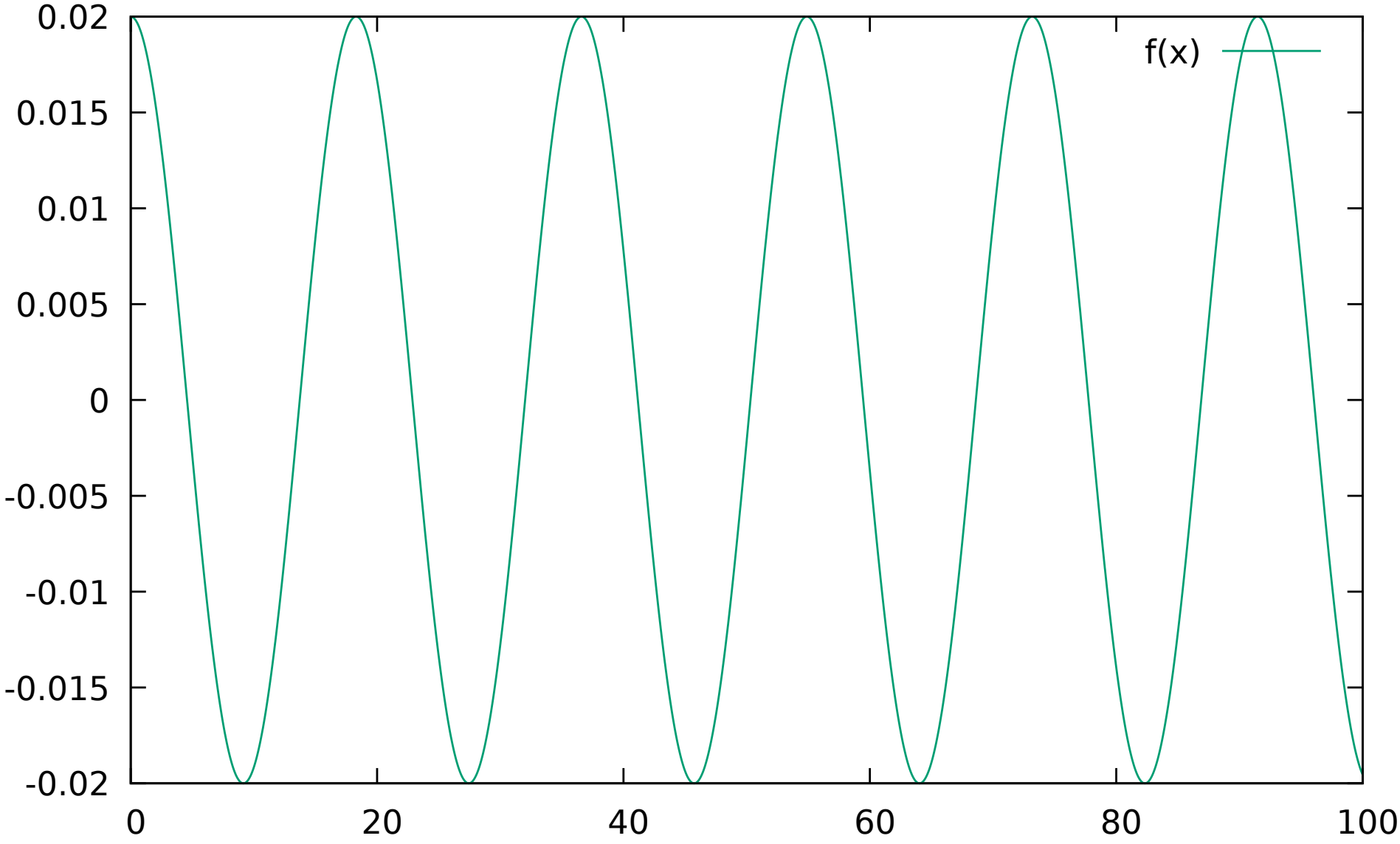
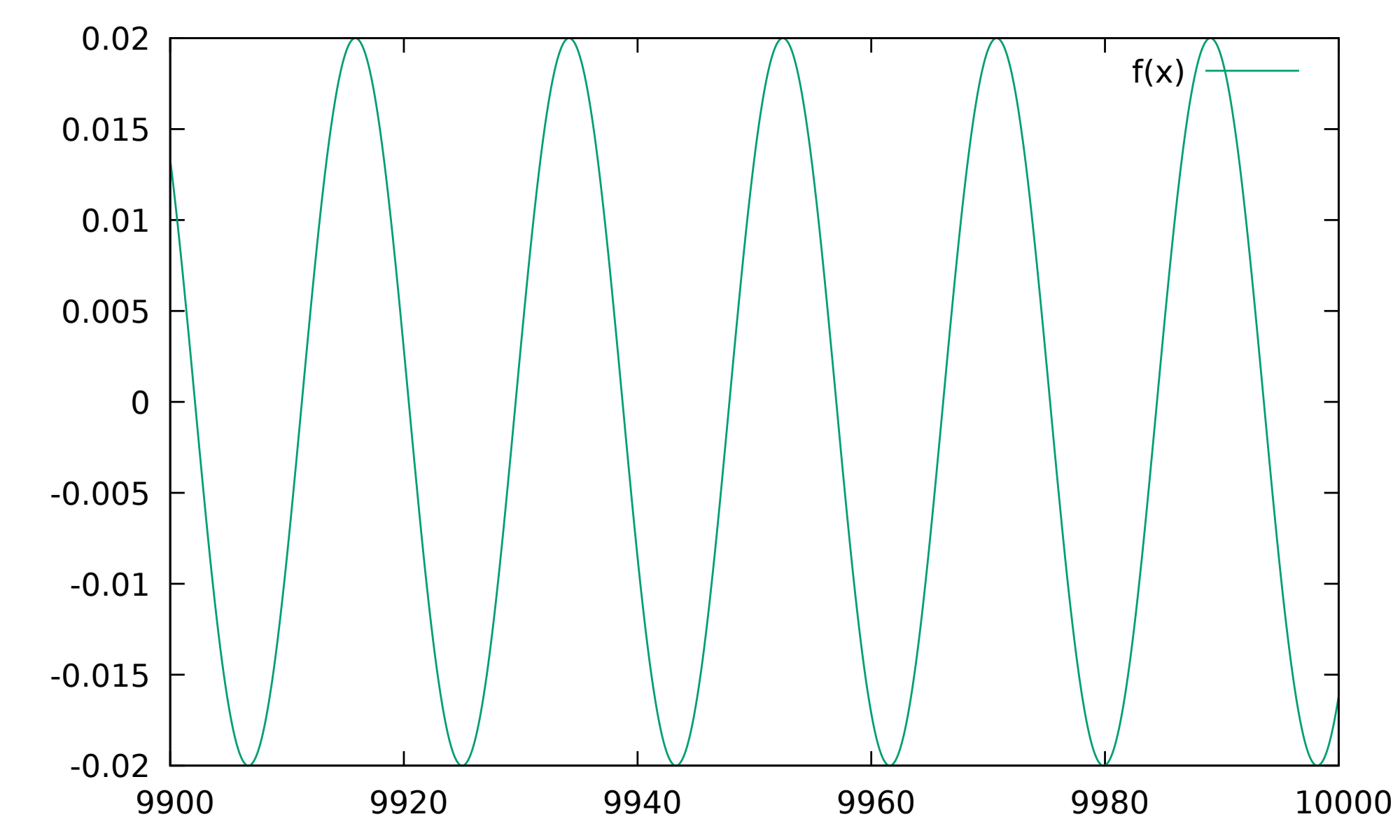

f(x)
0.001
0.0008
0.0006
0.0004
0.0002
0
-0.0002
-0.0004
-0.0006
-0.0008
-0.001
0
20
40
60
80
100

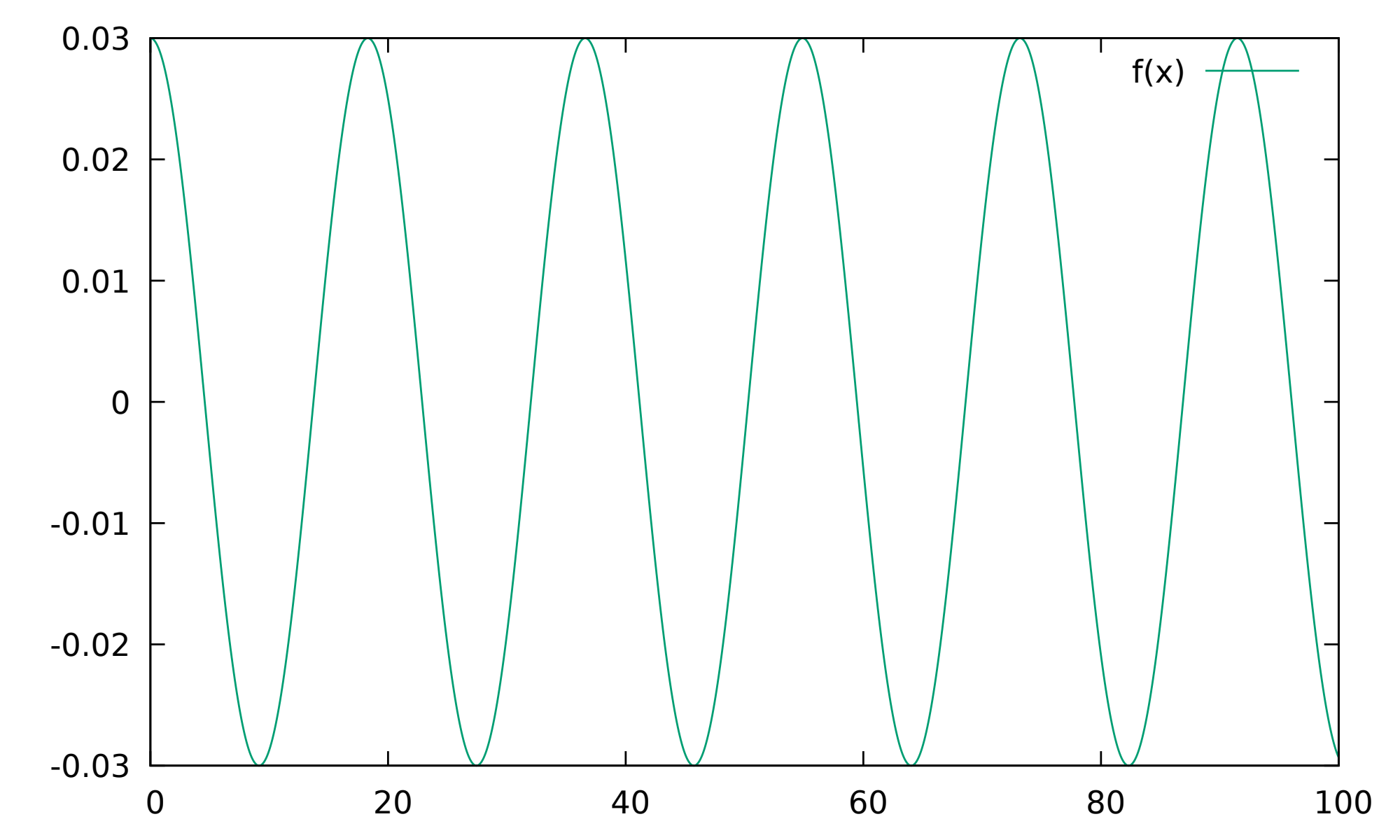

f(x)
0.001
0.0008
0.0006
0.0004
0.0002
0
-0.0002
-0.0004
-0.0006
-0.0008
-0.001
9900
9920
9940
9960
9980
10000

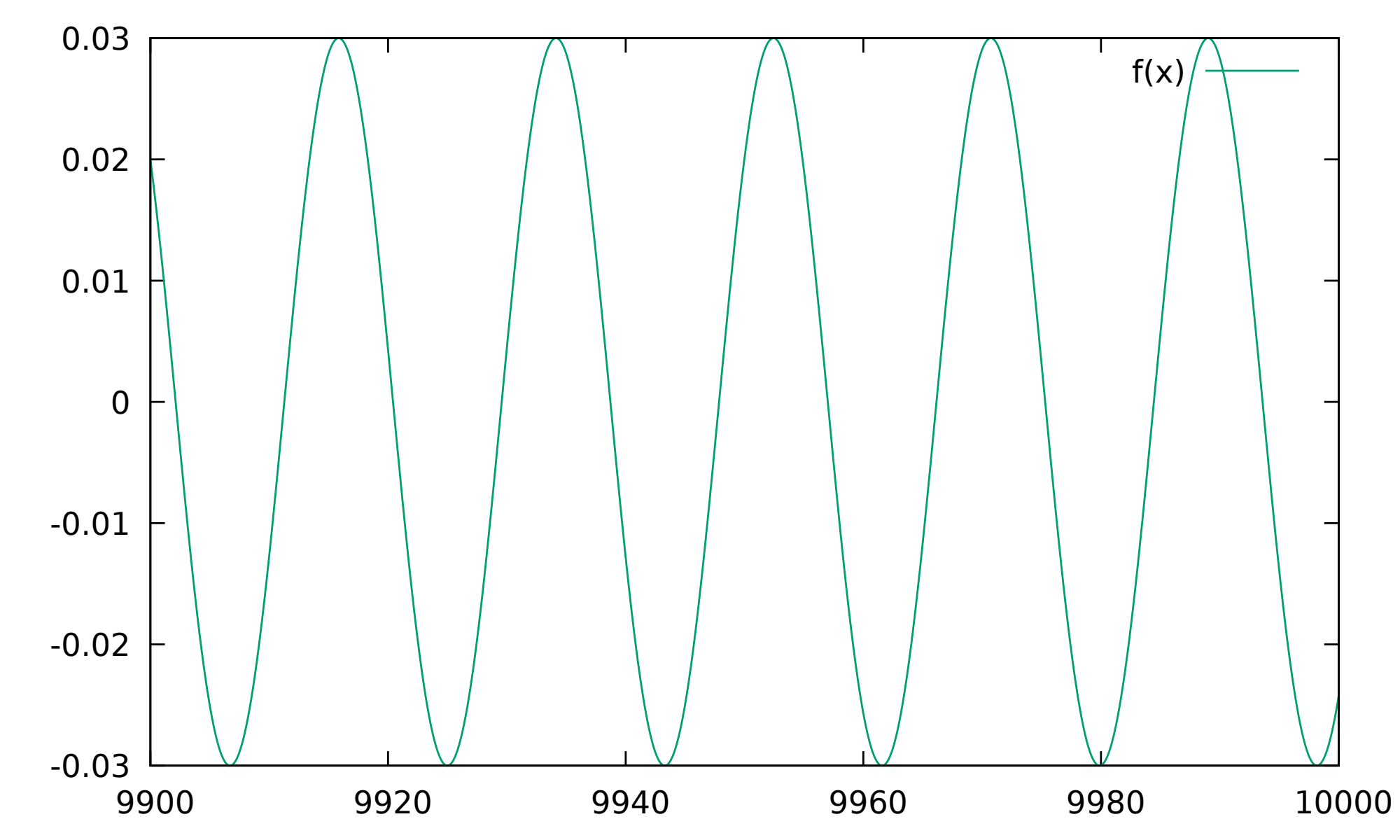

f(x)
0.01
0.008
0.006
0.004
0.002
0
-0.002
-0.004
-0.006
-0.008
-0.01
0
20
40
60
80
100

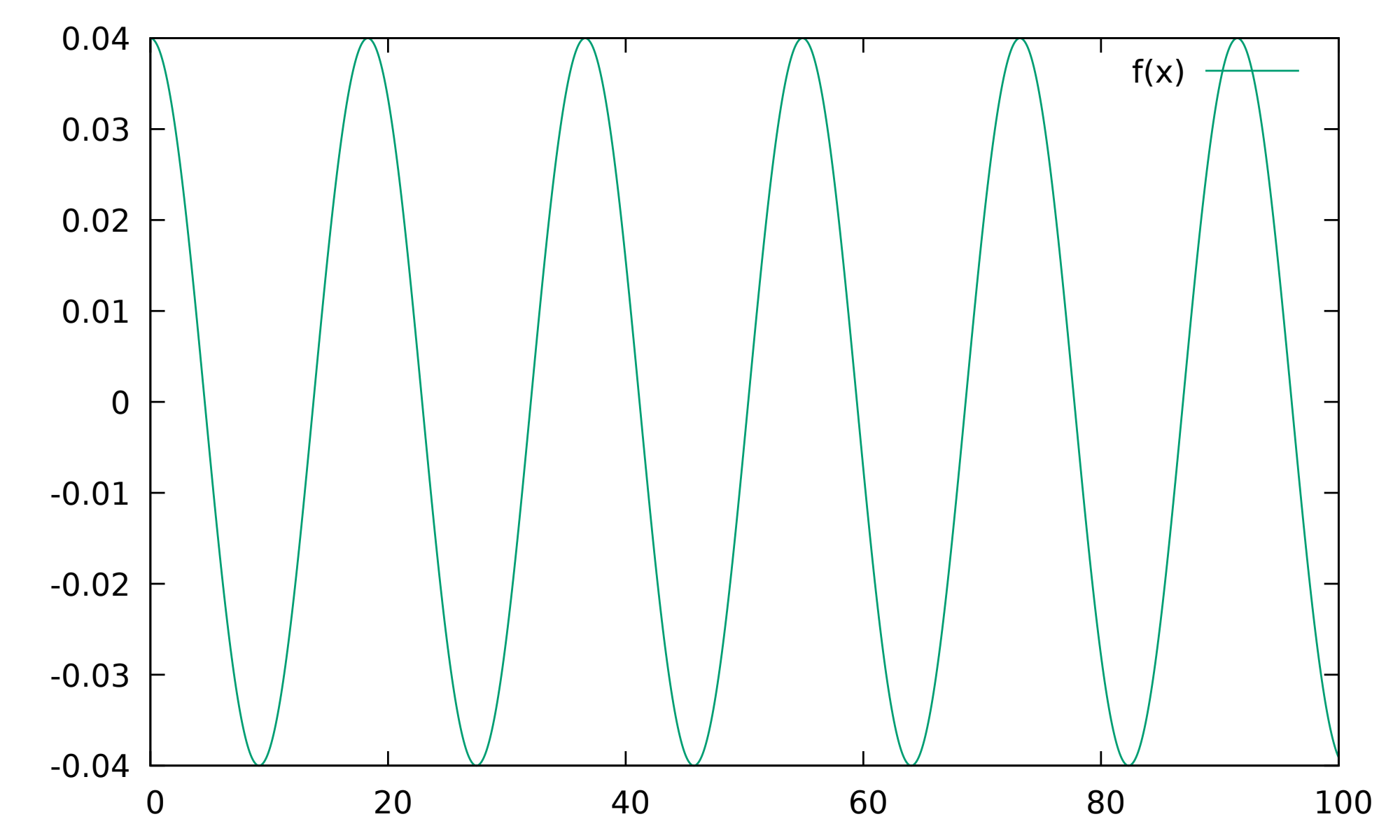

0.01
0.008
0.006
0.004
0.002
0
-0.002
-0.004
-0.006
-0.008
-0.01
9900
9920
9940
9960
9980
10000
f(x)

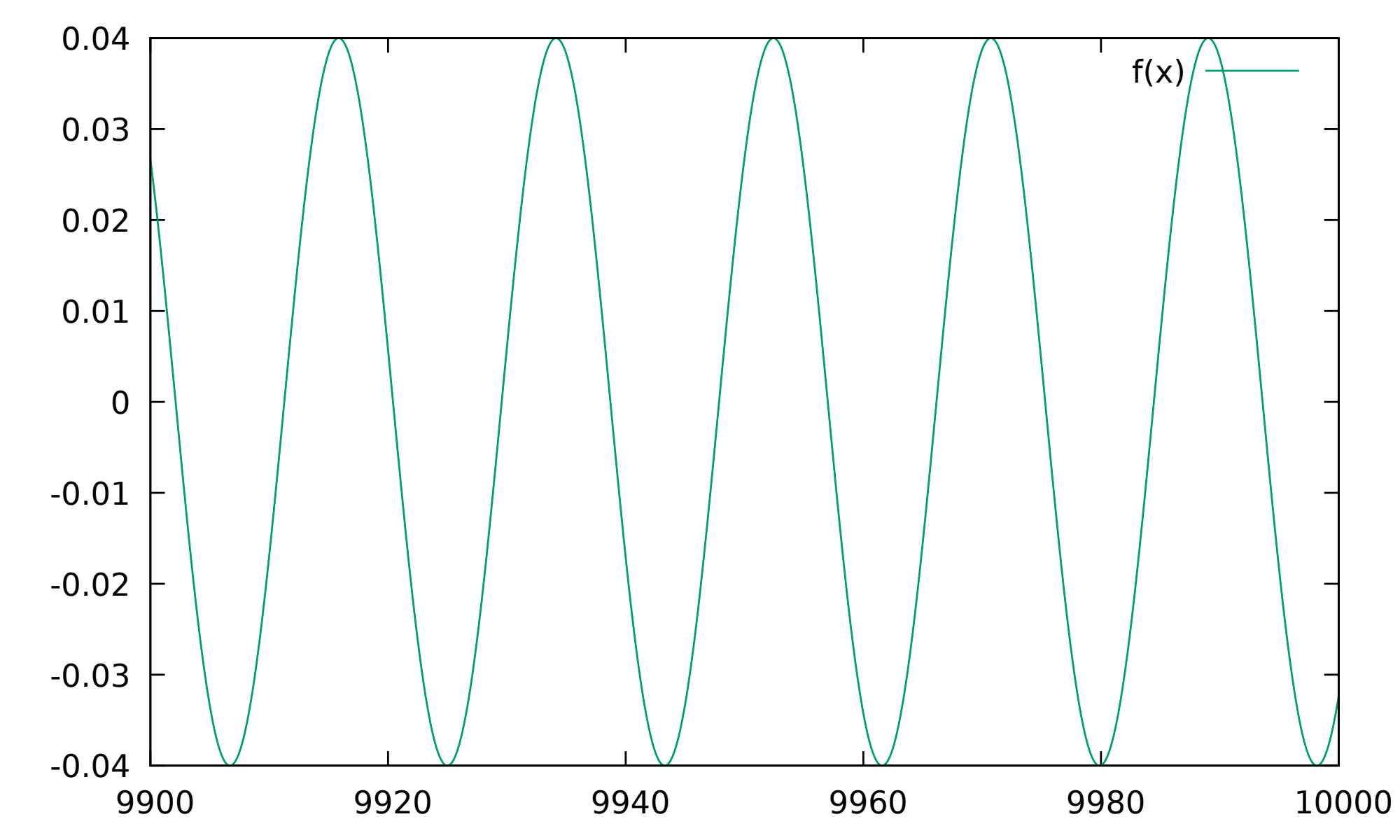

f(x)
0.02
0.015
0.01
0.005
0
-0.005
-0.01
-0.015
-0.02
0
20
40
60
80
100

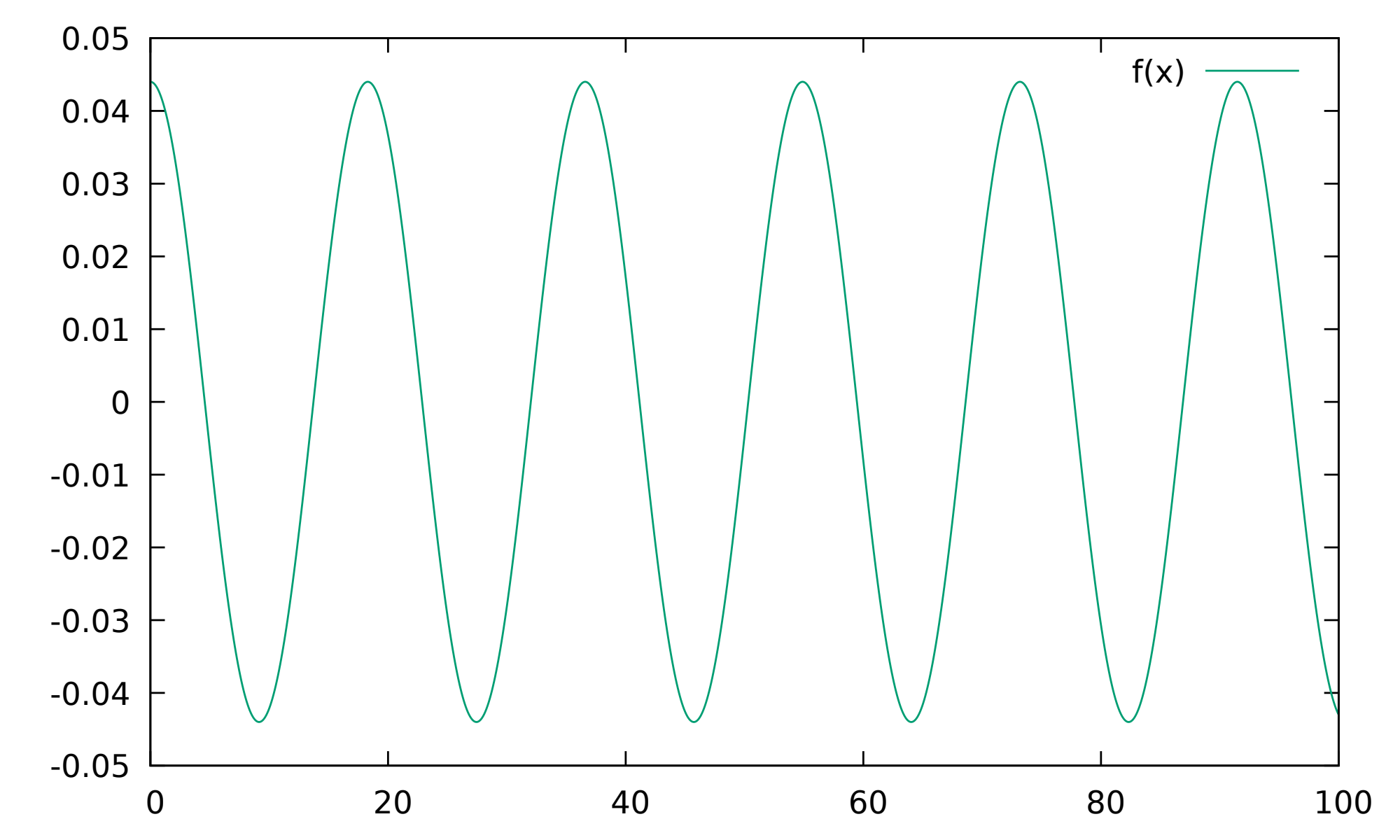

f(x)
0.02
0.015
0.01
0.005
0
-0.005
-0.01
-0.015
-0.02
9900
9920
9940
9960
9980
10000

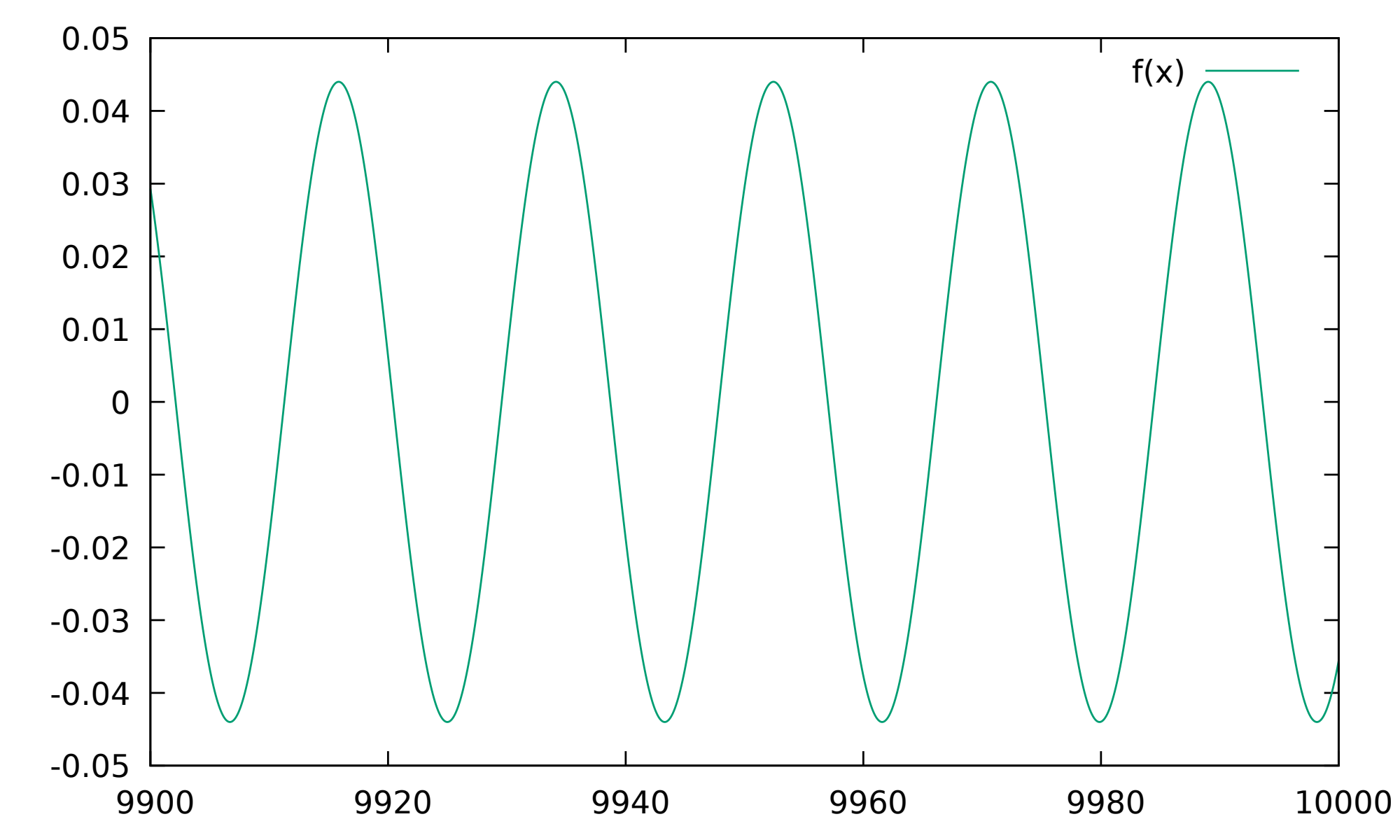

0.03
0.02
0.01
0
-0.01
-0.02
-0.03
0
20
40
60
80
100
f(x)

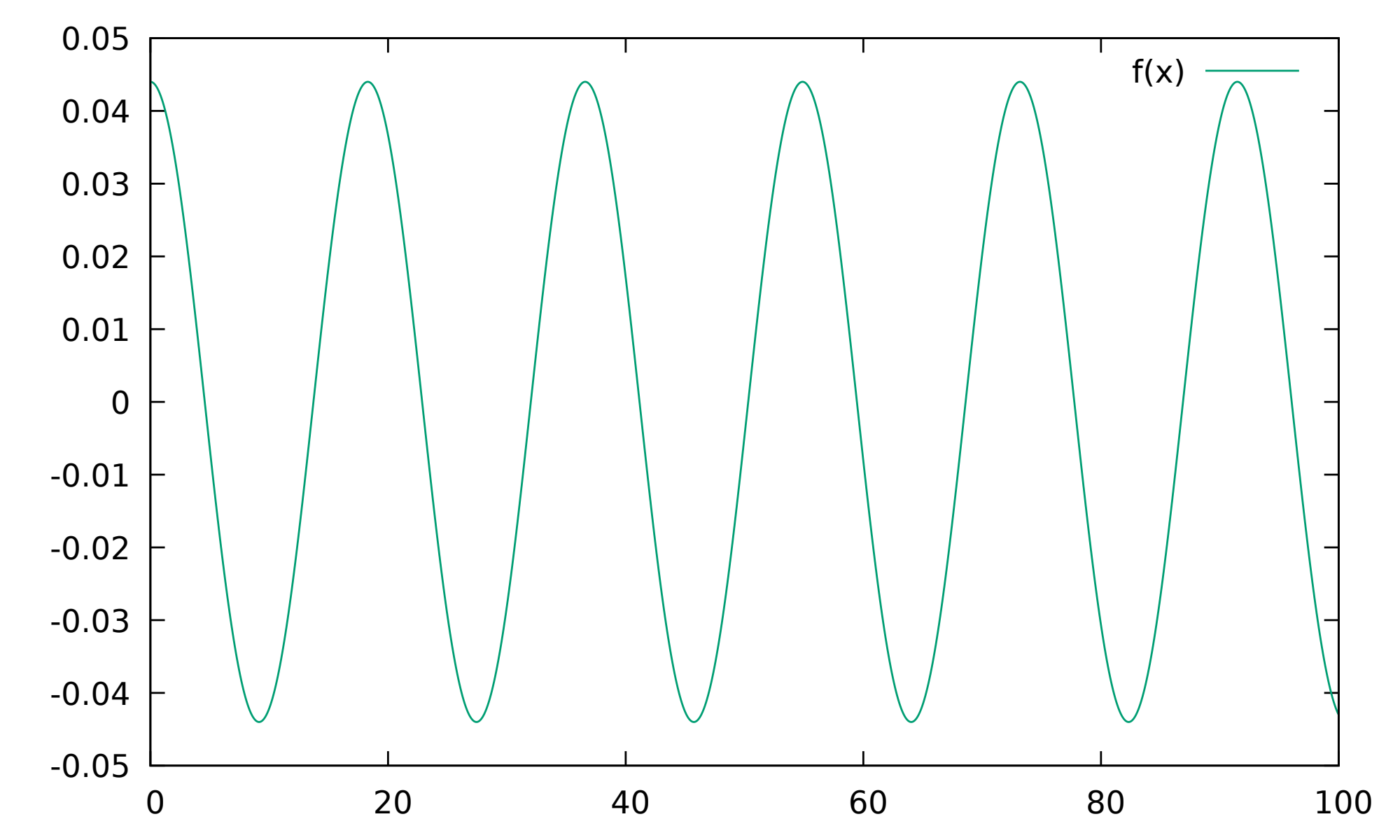

0.03
0.02
0.01
0
-0.01
-0.02
-0.03
9900
9920
9940
9960
9980
10000
f(x)

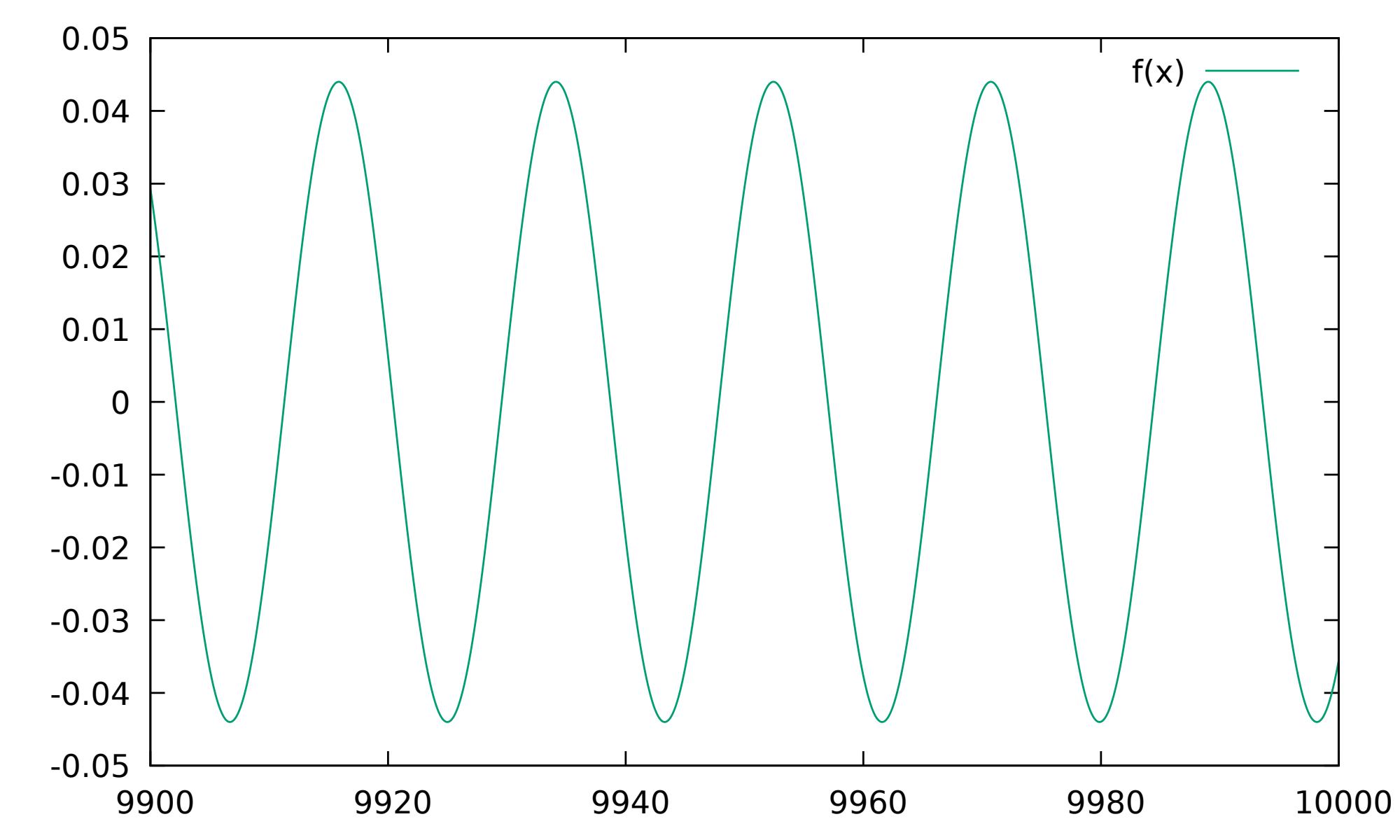

f(x)
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
0
20
40
60
80
100

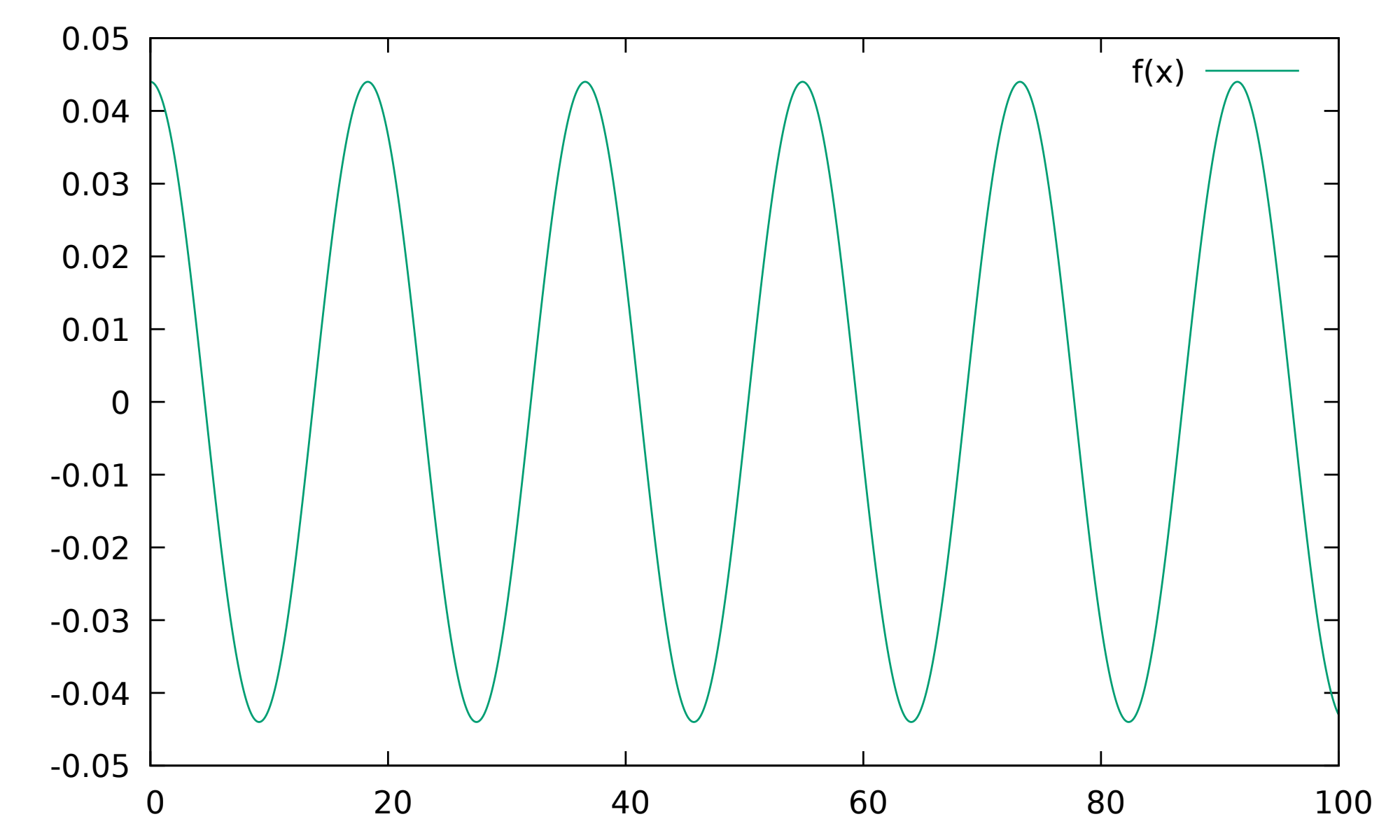

f(x)
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
9900
9920
9940
9960
9980
10000

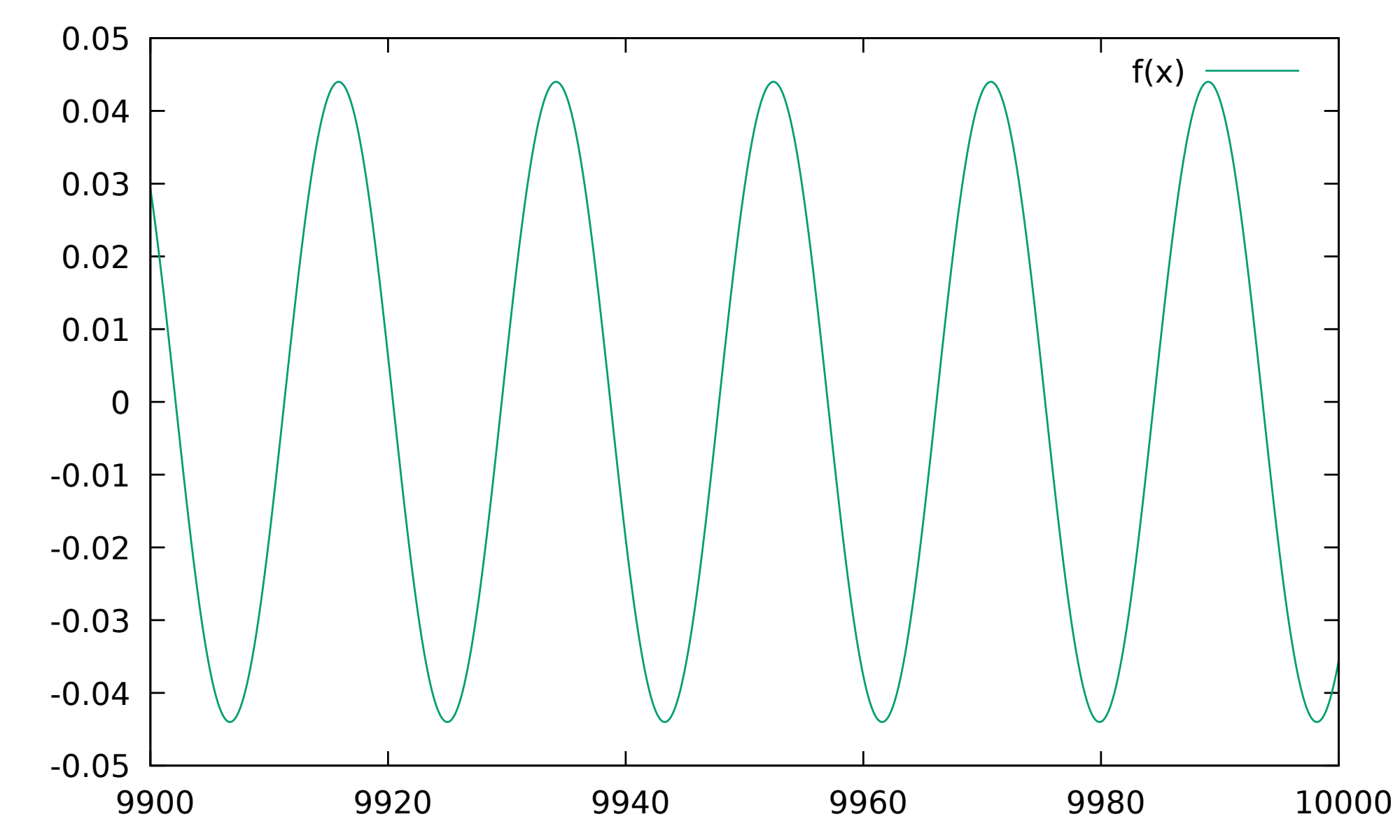

f(x)
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
0
20
40
60
80
100

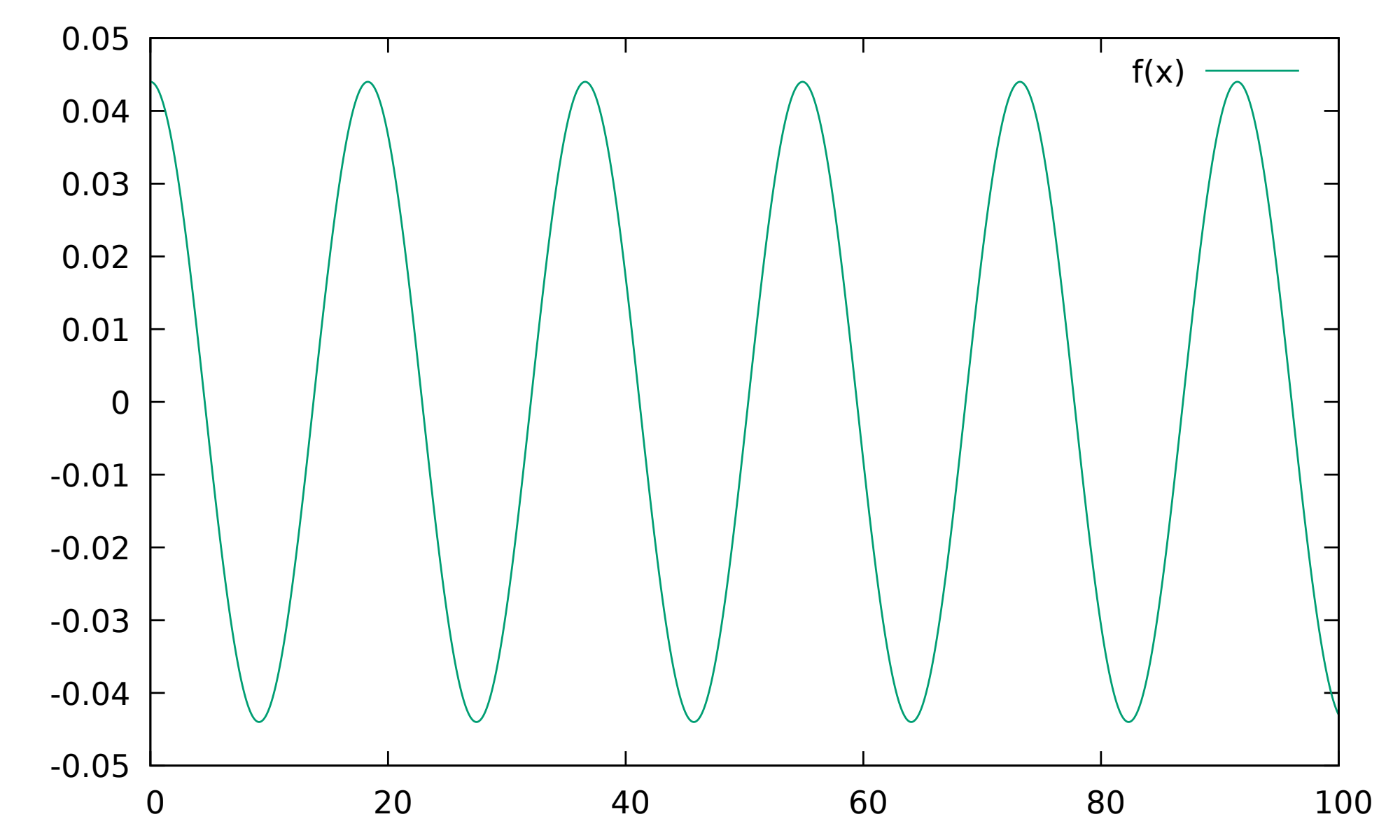

f(x)
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
9900
9920
9940
9960
9980
10000

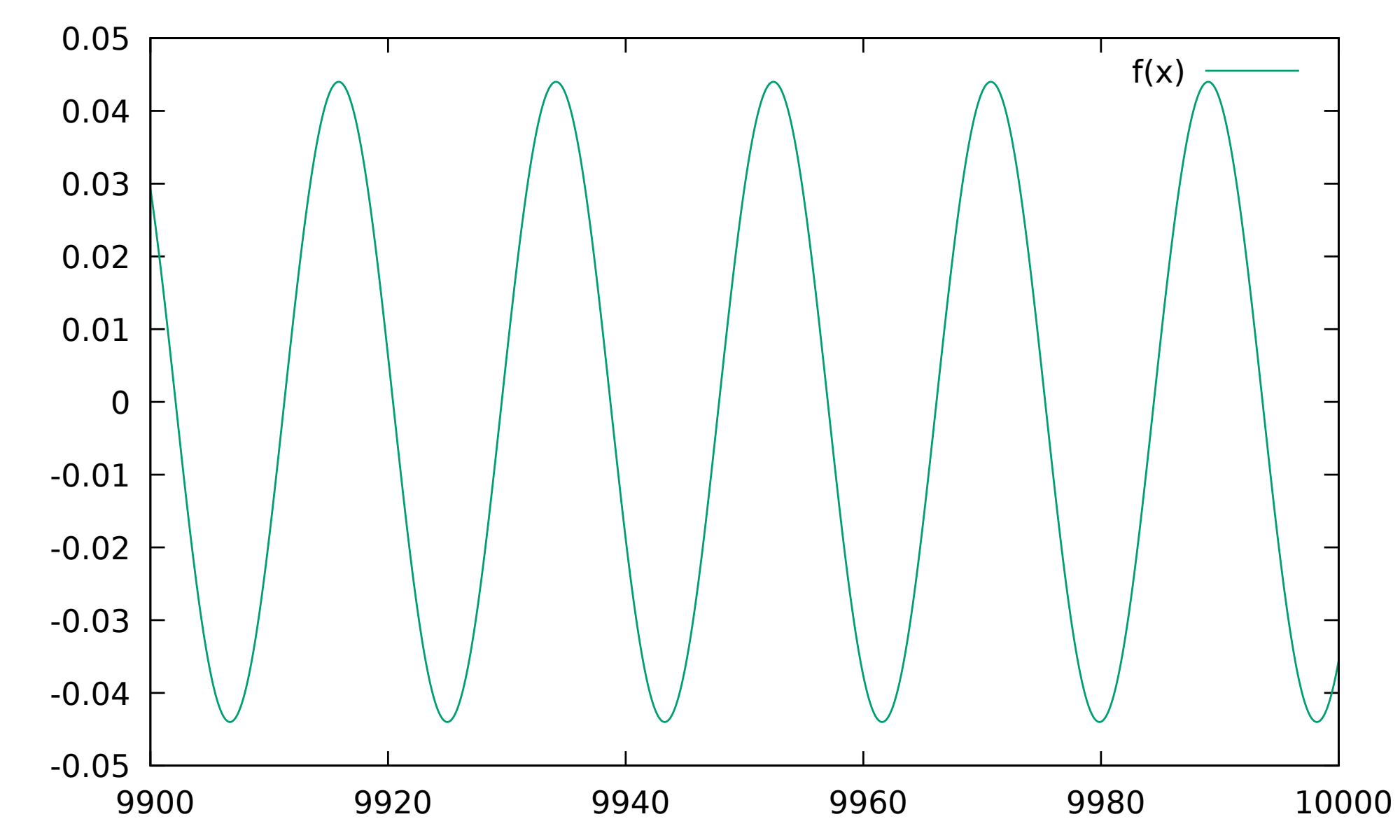

f(x)
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
0
20
40
60
80
100

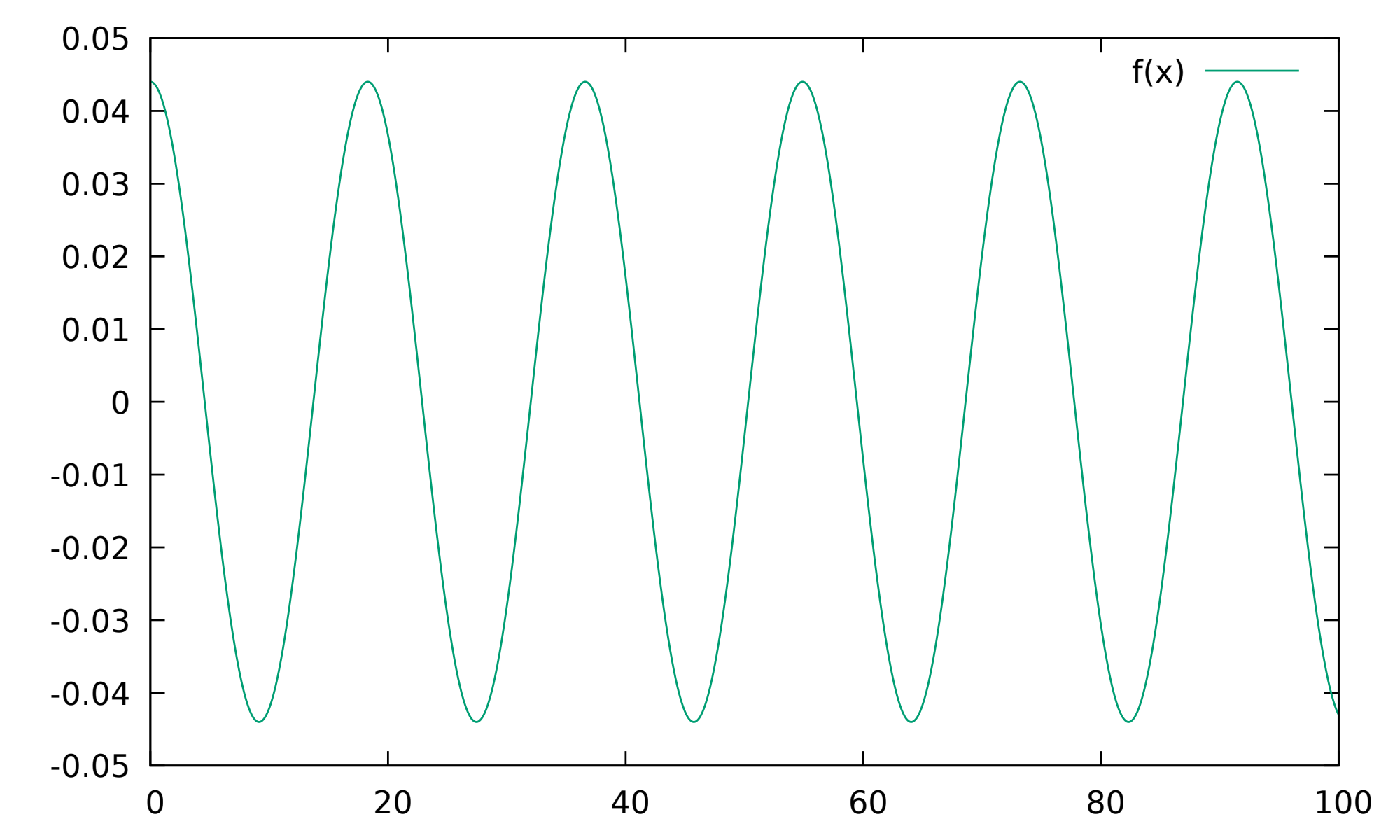

f(x)
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
9900
9920
9940
9960
9980
10000

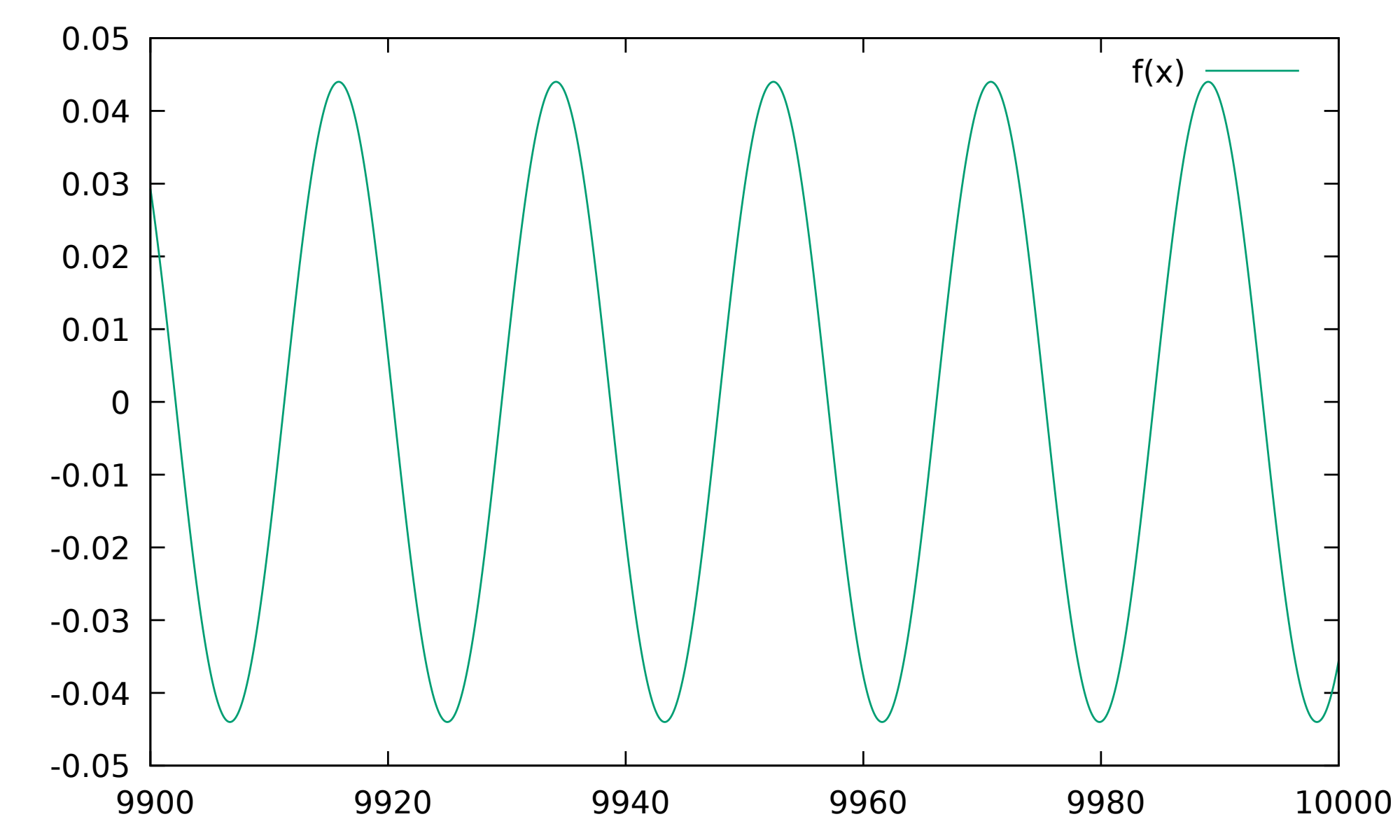

f(x)
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
0
20
40
60
80
100

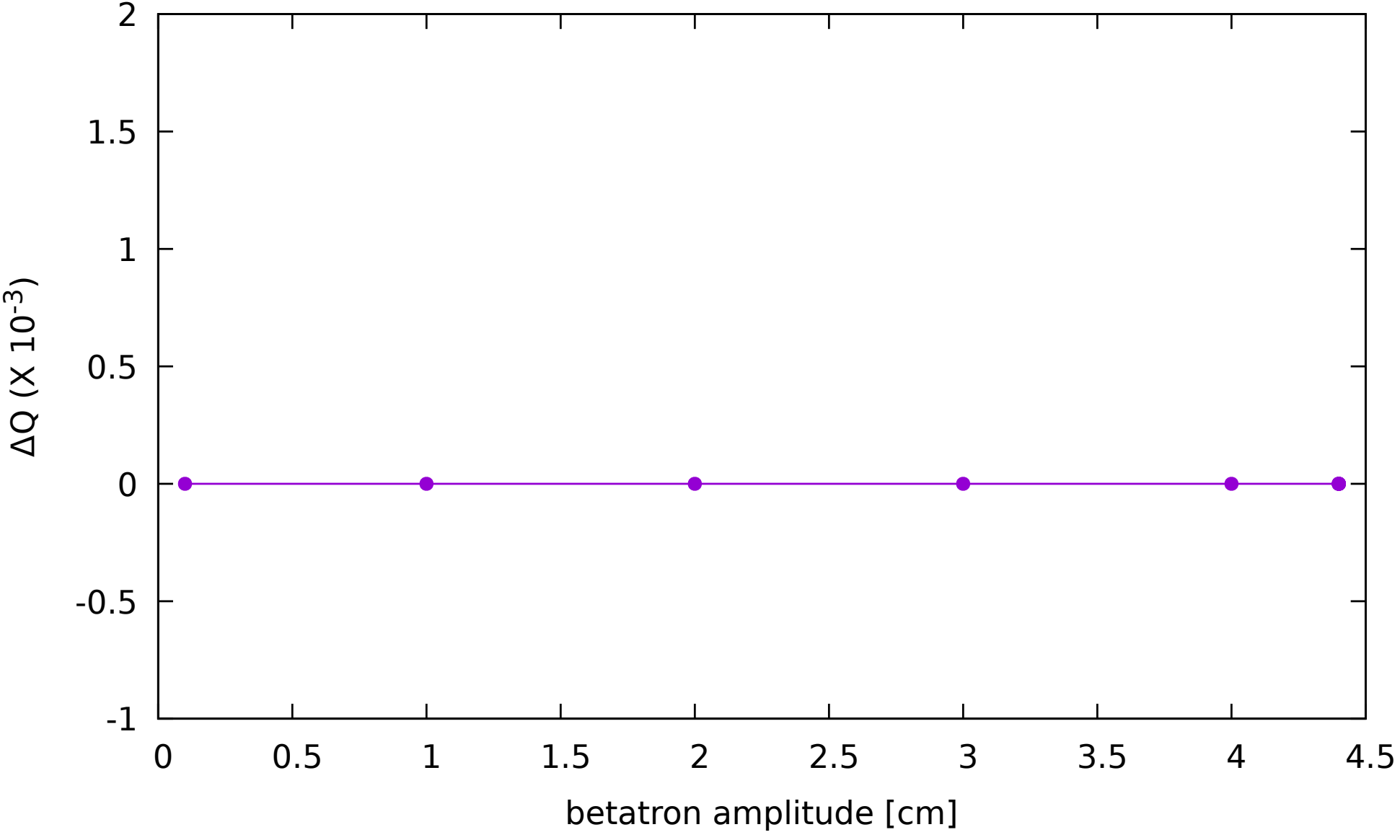

f(x)
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
9900
9920
9940
9960
9980
10000


f(x)
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
0
20
40
60
80
100


f(x)
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
9900
9920
9940
9960
9980
10000


f(x)
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
0
20
40
60
80
100


f(x)
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
9900
9920
9940
9960
9980
10000


2
1.5
1
0.5
0
-0.5
-1
ΔQ (X 10-3)
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
betatron amplitude [cm]