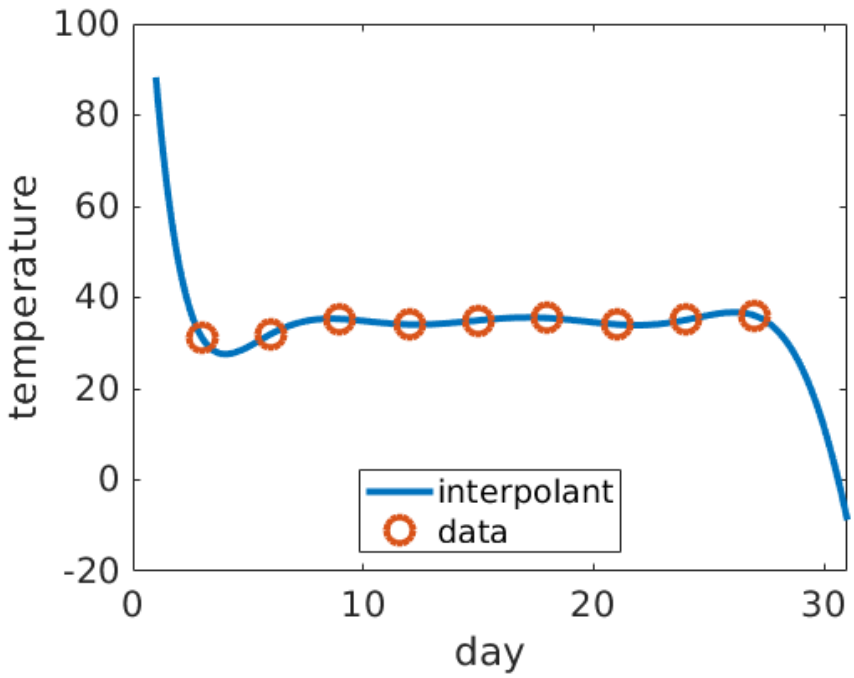
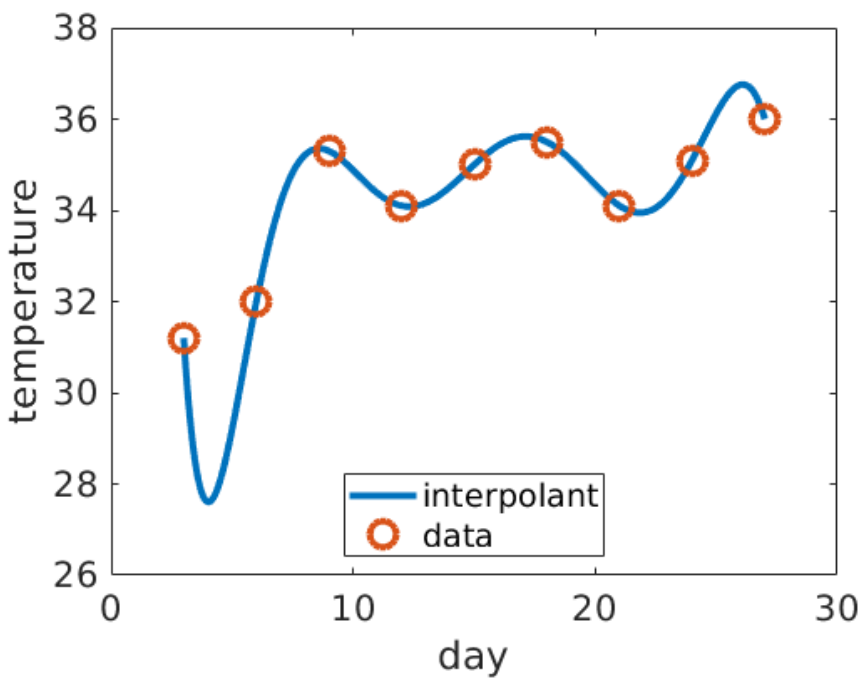
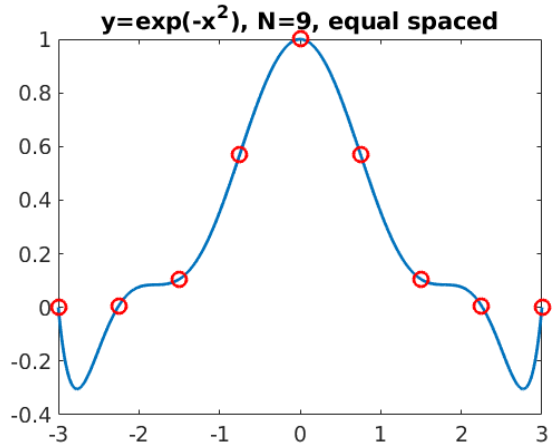
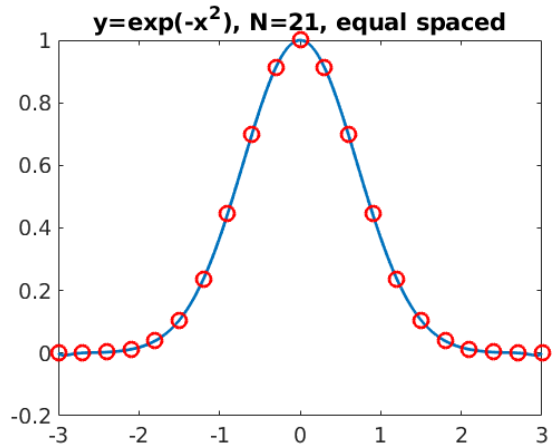
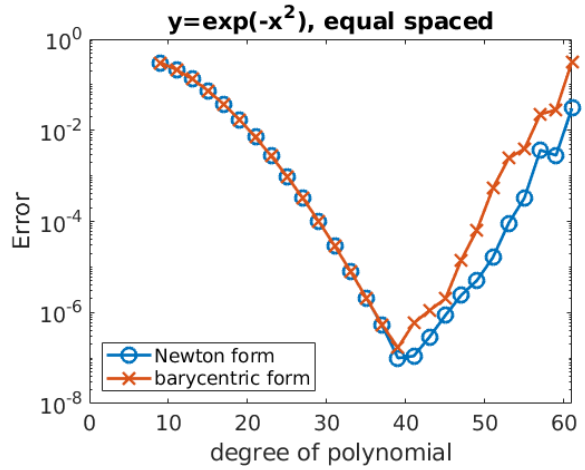
day	3	6	9	12	15	18	21	24	27
temperature	31.2	32.0	35.3	34.1	35.0	35.5	34.1	35.1	36.0

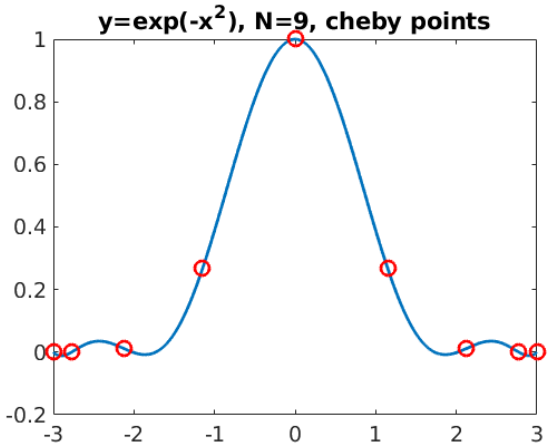


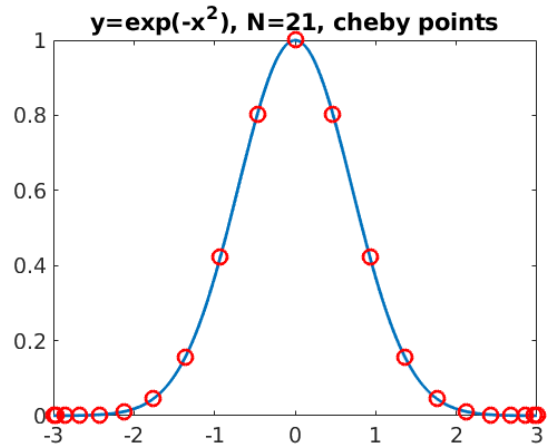


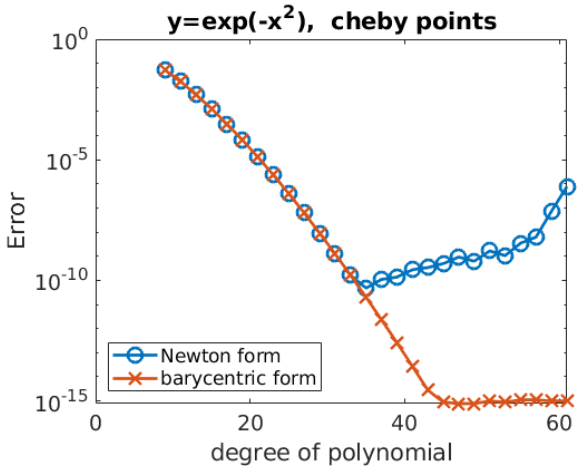

y=exp(-x^2), N=9, equal spaced
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-3
-2
-1
0
1
2
3

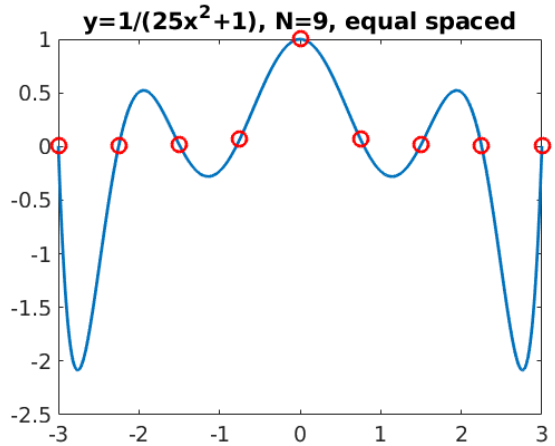

y=exp(-x^2), N=21, equal spaced
1
0.8
0.6
0.4
0.2
0
-0.2
-3
-2
-1
0
1
2
3

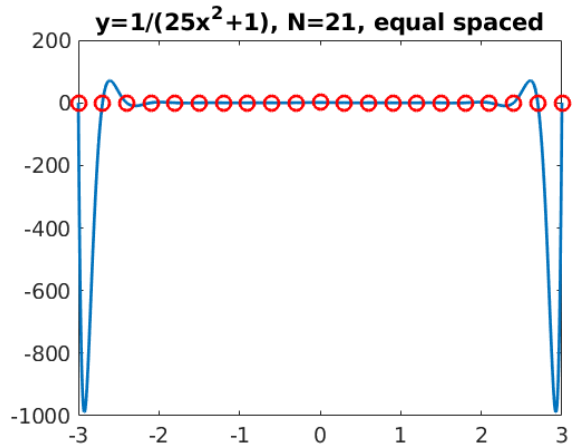

y=exp(-x^2), equal spaced
Error
10^0
10^-2
10^-4
10^-6
10^-8
0
10
20
30
40
50
60
degree of polynomial
Newton form
barycentric form

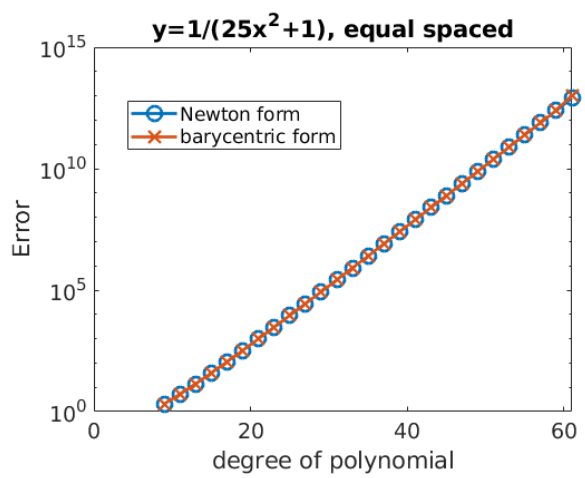

y=exp(-x^2), N=9, cheby points
1
0.8
0.6
0.4
0.2
0
-0.2
-3
-2
-1
0
1
2
3

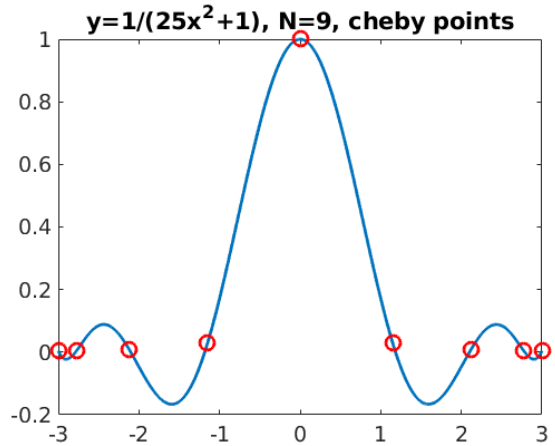

y=exp(-x^2), N=21, cheby points
1
0.8
0.6
0.4
0.2
0
-3
-2
-1
0
1
2
3

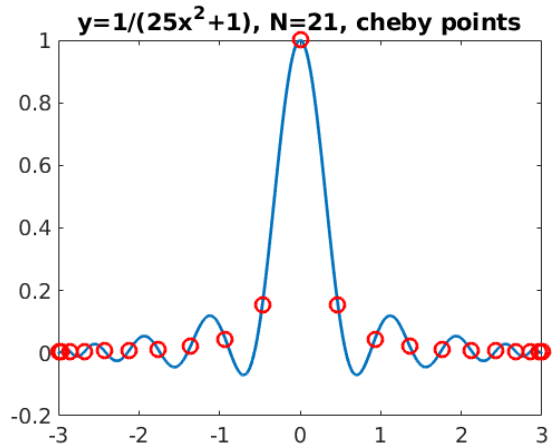

y=exp(-x^2), cheby points
10^0
10^-5
10^-10
10^-15
Error
0
20
40
60
degree of polynomial
Newton form
barycentric form

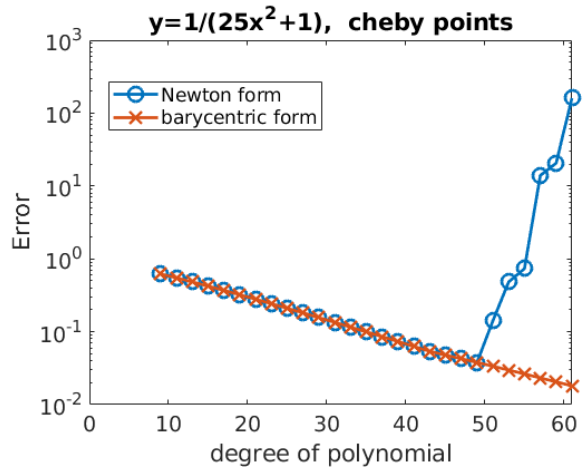

y=1/(25x^2+1), N=9, equal spaced
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
-3
-2
-1
0
1
2
3


y=1/(25x^2+1), N=21, equal spaced
200
0
-200
-400
-600
-800
-1000
-3
-2
-1
0
1
2
3


y=1/(25x^2+1), equal spaced
Newton form
barycentric form
Error
10^15
10^10
10^5
10^0
0
20
40
60
degree of polynomial


y=1/(25x^2+1), N=9, cheby points
1
0.8
0.6
0.4
0.2
0
-0.2
-3
-2
-1
0
1
2
3


y=1/(25x^2+1), N=21, cheby points
1
0.8
0.6
0.4
0.2
0
-0.2
-3
-2
-1
0
1
2
3


y=1/(25x^2+1), cheby points
Newton form
barycentric form
Error
degree of polynomial
10^3
10^2
10^1
10^0
10^-1
10^-2
0
10
20
30
40
50
60