Christopher Gonzalez

(4a) natural cubic spline coefficients

	A_n	B_n	C_n	D_n
0	1.30	0.53962	0.00000	-0.24764
1	1.50	0.42075	-0.29717	0.94691
2	1.85	1.08680	1.40726	-2.95638
3	2.10	1.29494	-0.36656	-0.44663
4	2.60	0.59339	-1.03618	0.44505
5	2.70	-0.02219	-0.50245	0.17415
6	2.40	-0.50340	-0.03222	0.078075
7	2.15	-0.47707	0.08488	1.31417
8	2.05	-0.07131	1.26764	-1.58121
9	2.10	0.26233	-0.15545	0.04311
10	2.25	0.08077	-0.02610	-0.00466
11	2.30	0.01455	-0.04010	-0.02444
12	2.25	-0.13900	-0.11345	0.01747
13	1.95	-0.33583	-0.05056	-0.01272

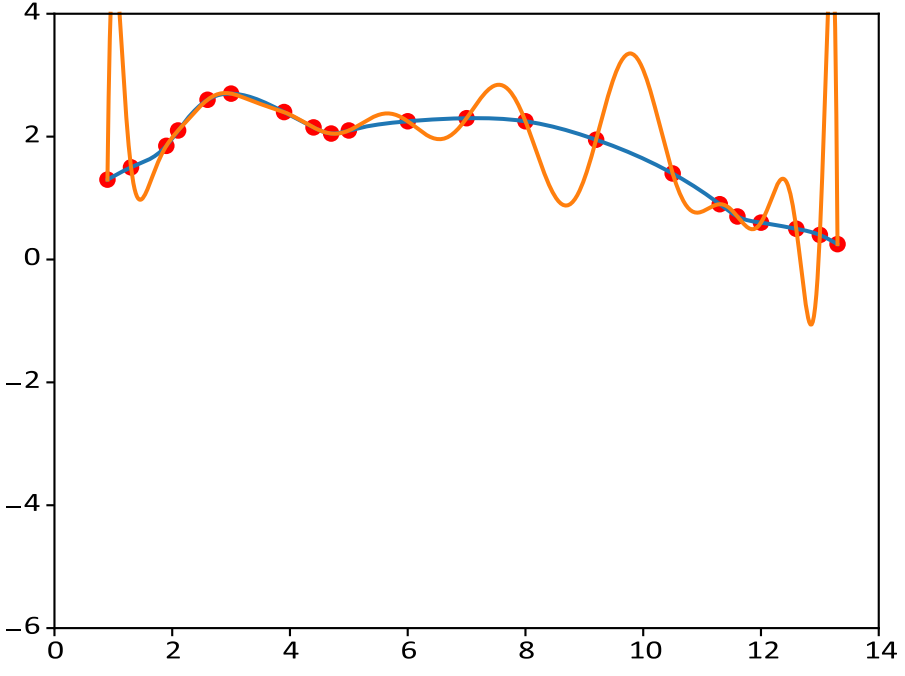
14	1.4	-0.53182	-0.10020	-0.02032
15	0.9	-0.73117	-0.14898	1.21340
16	0.7	-0.49294	0.94308	-0.83927
17	0.6	-0.14133	-0.06404	0.03638
18	0.5	-0.17890	0.00143	-0.44797
19	0.4	-0.39277	-0.53612	0.59569

(4b) interpolating polynomial coefficients

$F_{0,0}$	1.30000
$F_{1,1}$	0.50000
$F_{2,2}$	0.08333
$F_{3,3}$	0.62500
$F_{4,4}$	-0.90632
$F_{5,5}$	0.56683
$F_{6,6}$	-0.18391
$F_{7,7}$	0.03874
$F_{8,8}$	-0.00254
$F_{9,9}$	-0.00185
$F_{10,10}$	0.00057

$F_{11,11}$	-6.34107×10^{-6}
$F_{12,12}$	-4.29023×10^{-5}
$F_{13,13}$	1.57981×10^{-5}
$F_{14,14}$	-3.45353×10^{-6}
$F_{15,15}$	6.08595×10^{-7}
$F_{16,16}$	-9.86036×10^{-8}
$F_{17,17}$	1.46954×10^{-8}
$F_{18,18}$	-1.98371×10^{-9}
$F_{19,19}$	2.51853×10^{-10}
$F_{20,20}$	-3.07453×10^{-11}

(4c) the figure from Problem 3



Key:

Red Dots: Original Data Points

Blue Line: Cubic Spline

Orange Line: Interpolating Polynomial