

Hybrid Quadratic Fourier-Shammas Series Output Functions Maps

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INTRODUCTION

This file contains tables that guide you to select the various output text files you may wish to inspect. Each section has a table for a specific HQFS series. The tables include the values for the adjusted coefficient of determination to make it easier for you to inspect good function approximations.

OUTPUT FILES MAPS

Sine Series of Order 3

The next table shows a summary of results for the Sine series of the order 3:

$$Y = a_0 + a_1 * \sin(S_1 * gx(1, A_1, B_1) + Os_1) + a_2 * \sin(S_2 * gx(2, A_2, B_2) + Os_2) + a_3 * \sin(S_3 * gx(3, A_3, B_3) + Os_1) + a_4 * x + a_5 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 3 Sine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_3_sin_run1.txt	acosh(x)	A+B*i	0.99499394
acosh_2_3_sin_run1.txt	acosh(x)	A+B/i	0.99073450
acosh_3_3_sin_run1.txt	acosh(x)	A+B*sqrt(i)	0.98581211
acosh_4_3_sin_run1.txt	acosh(x)	A+B*log(i)^4	0.99334261
arccos_1_3_sin_run1.txt	arccos(x)	A+B*i	0.99940131
arccos_2_3_sin_run1.txt	arccos(x)	A+B/i	0.99946614
arccos_3_3_sin_run1.txt	arccos(x)	A+B*sqrt(i)	0.99946894
arccos_4_3_sin_run1.txt	arccos(x)	A+B*log(i)^4	0.99956084
arcsin_1_3_sin_run1.txt	arcsin(x)	A+B*i	0.99951929
arcsin_2_3_sin_run1.txt	arcsin(x)	A+B/i	0.99947632
arcsin_3_3_sin_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99953222
arcsin_4_3_sin_run1.txt	arcsin(x)	A+B*log(i)^4	0.99950706
arctan_1_3_sin_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_3_sin_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_3_sin_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_3_sin_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_3_sin_run1.txt	asinh(x)	A+B*i	0.99382433
asinh_2_3_sin_run1.txt	asinh(x)	A+B/i	0.99038792
asinh_3_3_sin_run1.txt	asinh(x)	A+B*sqrt(i)	0.98417562
asinh_4_3_sin_run1.txt	asinh(x)	A+B*log(i)^4	0.99443984
atanh_1_3_sin_run1.txt	atanh(x)	A+B*i	0.99204005
atanh_2_3_sin_run1.txt	atanh(x)	A+B/i	0.99246830
atanh_3_3_sin_run1.txt	atanh(x)	A+B*sqrt(i)	0.99231245
atanh_4_3_sin_run1.txt	atanh(x)	A+B*log(i)^4	0.99255737
CI_1_3_sin_run1.txt	Ci(x)	A+B*i	0.95335631
Ci_2_3_sin_run1.txt	Ci(x)	A+B/i	0.87112760
Ci_3_3_sin_run1.txt	Ci(x)	A+B*sqrt(i)	0.93944913
CI_4_3_sin_run1.txt	Ci(x)	A+B*log(i)^4	0.91604459
cosh_1_3_sin_run1.txt	cosh(x)	A+B*i	0.99999992
cosh_2_3_sin_run1.txt	cosh(x)	A+B/i	0.99999975
cosh_3_3_sin_run1.txt	cosh(x)	A+B*sqrt(i)	0.99999997
cosh_4_3_sin_run1.txt	cosh(x)	A+B*log(i)^4	0.99999998
digamma_2_3_sin_run1.txt	digamma(x)	A+B/i	0.99506418
digamma_1_3_sin_run1.txt	digamma(x)	A+B*i	0.99840051
digamma_3_3_sin_run1.txt	digamma(x)	A+B*sqrt(i)	0.99333798
digamma_4_3_sin_run1.txt	digamma(x)	A+B*log(i)^4	0.99816362
erf_1_3_sin_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_3_sin_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_3_sin_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_3_sin_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_3_sin_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_3_sin_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_3_sin_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_3_sin_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_3_sin_run1.txt	FresnelCosine(x)	A+B*i	0.93002619
FresnelCosine_2_3_sin_run1.txt	FresnelCosine(x)	A+B/i	0.93002616
FresnelCosine_3_3_sin_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.93857196
FresnelCosine_4_3_sin_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.92564156
FresnelSine_1_3_sin_run1.txt	FresnelSine(x)	A+B*i	0.90795058

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine 2 3 sin run1.txt	FresnelSine(x)	A+B/i	0.87665878
FresnelSine 3 3 sin run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.93030338
FresnelSine 4 3 sin run1.txt	FresnelSine(x)	A+B*log(i)^4	0.92913637
J0x 1 3 sin run1.txt	J0(x)	A+B*i	0.98122849
J0x 2 3 sin run1.txt	J0(x)	A+B/i	0.98475443
J0x 3 3 sin run1.txt	J0(x)	A+B*sqrt(i)	0.97869343
J0x 4 3 sin run1.txt	J0(x)	A+B*log(i)^4	0.98397512
J1x 1 3 sin run1.txt	J1(x)	A+B*i	0.98714122
J1x 2 3 sin run1.txt	J1(x)	A+B/i	0.99509980
J1x 3 3 sin run1.txt	J1(x)	A+B*sqrt(i)	0.97118620
J1x 4 3 sin run1.txt	J1(x)	A+B*log(i)^4	0.83818651
J2x 1 3 sin run1.txt	J2(x)	A+B*i	0.99366596
J2x 2 3 sin run1.txt	J2(x)	A+B/i	0.99237180
J2x 3 3 sin run1.txt	J2(x)	A+B*sqrt(i)	0.94145713
J2x 4 3 sin run1.txt	J2(x)	A+B*log(i)^4	0.99303401
J3x 1 3 sin run1.txt	J3(x)	A+B*i	0.97356151
J3x 2 3 sin run1.txt	J3(x)	A+B/i	0.97784941
J3x 3 3 sin run1.txt	J3(x)	A+B*sqrt(i)	0.93572416
J3x 4 3 sin run1.txt	J3(x)	A+B*log(i)^4	0.97567872
J4x 1 3 sin run1.txt	J4(x)	A+B*i	0.97370957
J4x 2 3 sin run1.txt	J4(x)	A+B/i	0.96251294
J4x 3 3 sin run1.txt	J4(x)	A+B*sqrt(i)	0.91884315
J4x 4 3 sin run1.txt	J4(x)	A+B*log(i)^4	0.98408041
J5x 1 3 sin run1.txt	J5(x)	A+B*i	0.84493538
J5x 2 3 sin run1.txt	J5(x)	A+B/i	0.84503374
J5x 3 3 sin run1.txt	J5(x)	A+B*sqrt(i)	0.84051706
J5x 4 3 sin run1.txt	J5(x)	A+B*log(i)^4	0.95770781
ln 1 3 sin run1.txt	ln(x)	A+B*i	0.99999102
ln 2 3 sin run1.txt	ln(x)	A+B/i	0.99999708
ln 3 3 sin run1.txt	ln(x)	A+B*sqrt(i)	0.99998537
ln 4 3 sin run1.txt	ln(x)	A+B*log(i)^4	0.99999384
log10Gamma 1 3 sin run1.txt	log10Gamma(x)	A+B*i	0.99999847
log10Gamma 2 3 sin run1.txt	log10Gamma(x)	A+B/i	0.99999398
log10Gamma 3 3 sin run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999075
log10Gamma 4 3 sin run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999839
log 1 3 sin run1.txt	log(x)	A+B*i	0.99998236
log 2 3 sin run1.txt	log(x)	A+B/i	0.99999196
log 3 3 sin run1.txt	log(x)	A+B*sqrt(i)	0.99999123
log 4 3 sin run1.txt	log(x)	A+B*log(i)^4	0.99999414
pwr10 1 3 sin run1.txt	10^x	A+B*i	1.00000000
pwr10 2 3 sin run1.txt	10^x	A+B/i	1.00000000
pwr10 3 3 sin run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10 4 3 sin run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh 1 3 sin run1.txt	sinh(x)	A+B*i	0.99999990
sinh 2 3 sin run1.txt	sinh(x)	A+B/i	0.99999996
sinh 3 3 sin run1.txt	sinh(x)	A+B*sqrt(i)	0.99999997
sinh 4 3 sin run1.txt	sinh(x)	A+B*log(i)^4	0.99999998
Si 1 3 sin run1.txt	Si(x)	A+B*i	0.87859939
Si 2 3 sin run1.txt	Si(x)	A+B/i	0.97060967

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si 3 3 sin run1.txt	Si (x)	A+B*sqrt(i)	0.87732100
Si 4 3 sin run1.txt	Si (x)	A+B*log(i)^4	0.95751421
tanh 1 3 sin run1.txt	tanh(x)	A+B*i	0.99999996
tanh 2 3 sin run1.txt	tanh(x)	A+B/i	0.99999992
tanh 3 3 sin run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh 4 3 sin run1.txt	tanh(x)	A+B*log(i)^4	0.99999993
tan 1 3 sin run1.txt	tan(x)	A+B*i	1.00000000
tan 2 3 sin run1.txt	tan(x)	A+B/i	0.99999999
tan 3 3 sin run1.txt	tan(x)	A+B*sqrt(i)	0.99999999
tan 4 3 sin run1.txt	tan(x)	A+B*log(i)^4	0.99999999
tinvl 1 3 sin run1.txt	tinvl(0.95,x)	A+B*i	0.80217748
tinvl 2 3 sin run1.txt	tinvl(0.95,x)	A+B/i	0.82773639
tinvl 3 3 sin run1.txt	tinvl(0.95,x)	A+B*sqrt(i)	0.80627845
tinvl 4 3 sin run1.txt	tinvl(0.95,x)	A+B*log(i)^4	0.89861354
tinvs 1 3 sin run1.txt	tinvs(0.975,x)	A+B*i	0.77284033
tinvs 2 3 sin run1.txt	tinvs(0.975,x)	A+B/i	0.78930447
tinvs 3 3 sin run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.77796415
tinvs 4 3 sin run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.87624781
trigamma 1 3 sin run1.txt	trigamma(x)	A+B*i	0.79508728
trigamma 2 3 sin run1.txt	trigamma(x)	A+B/i	0.71013397
trigamma 3 3 sin run1.txt	trigamma(x)	A+B*sqrt(i)	0.66719766
trigamma 4 3 sin run1.txt	trigamma(x)	A+B*log(i)^4	0.76871635

Sine Series of Order 4

The next table shows a summary of results for the Sine series of the order 4:

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \sin(S_2 * gx(2,A_2,B_2) + Os_2) + \\ a_3 * \sin(S_3 * gx(3,A_3,B_3) + Os_3) + a_4 * \sin(S_4 * gx(4,A_4,B_4) + Os_4) + \\ a_5 * x + a_6 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 4 Sine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_4_sin_run1.txt	acosh(x)	A+B*i	0.99478437
acosh_2_4_sin_run1.txt	acosh(x)	A+B/i	0.98954267
acosh_3_4_sin_run1.txt	acosh(x)	A+B*sqrt(i)	0.99404694
acosh_4_4_sin_run1.txt	acosh(x)	A+B*log(i)^4	0.99417358
arccos_1_4_sin_run1.txt	arccos(x)	A+B*i	0.99966453
arccos_2_4_sin_run1.txt	arccos(x)	A+B/i	0.99964386
arccos_3_4_sin_run1.txt	arccos(x)	A+B*sqrt(i)	0.99966254
arccos_4_4_sin_run1.txt	arccos(x)	A+B*log(i)^4	0.99966315
arcsin_1_4_sin_run1.txt	arcsin(x)	A+B*i	0.99967033
arcsin_2_4_sin_run1.txt	arcsin(x)	A+B/i	0.99966039
arcsin_3_4_sin_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99960046
arcsin_4_4_sin_run1.txt	arcsin(x)	A+B*log(i)^4	0.99966338
arctan_1_4_sin_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_4_sin_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_4_sin_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_4_sin_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_4_sin_run1.txt	asinh(x)	A+B*i	0.99437847
asinh_2_4_sin_run1.txt	asinh(x)	A+B/i	0.99195368
asinh_3_4_sin_run1.txt	asinh(x)	A+B*sqrt(i)	0.98340632
asinh_4_4_sin_run1.txt	asinh(x)	A+B*log(i)^4	0.99805245
atanh_1_4_sin_run1.txt	atanh(x)	A+B*i	0.99438758
atanh_2_4_sin_run1.txt	atanh(x)	A+B/i	0.99432966
atanh_3_4_sin_run1.txt	atanh(x)	A+B*sqrt(i)	0.99439085
atanh_4_4_sin_run1.txt	atanh(x)	A+B*log(i)^4	0.99380368
CI_1_4_sin_run1.txt	Ci(x)	A+B*i	0.87526869
Ci_2_4_sin_run1.txt	Ci(x)	A+B/i	0.92669362
Ci_3_4_sin_run1.txt	Ci(x)	A+B*sqrt(i)	0.88136143
CI_4_4_sin_run1.txt	Ci(x)	A+B*log(i)^4	0.95416191
cosh_1_4_sin_run1.txt	cosh(x)	A+B*i	0.99999991
cosh_2_4_sin_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_4_sin_run1.txt	cosh(x)	A+B*sqrt(i)	1.00000000
cosh_4_4_sin_run1.txt	cosh(x)	A+B*log(i)^4	0.99999998
digamma_2_4_sin_run1.txt	digamma(x)	A+B/i	0.99444546
digamma_1_4_sin_run1.txt	digamma(x)	A+B*i	0.99832290
digamma_3_4_sin_run1.txt	digamma(x)	A+B*sqrt(i)	0.99798860
digamma_4_4_sin_run1.txt	digamma(x)	A+B*log(i)^4	0.99816262
erf_1_4_sin_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_4_sin_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_4_sin_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_4_sin_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_4_sin_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_4_sin_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_4_sin_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_4_sin_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_4_sin_run1.txt	FresnelCosine(x)	A+B*i	0.95617283
FresnelCosine_2_4_sin_run1.txt	FresnelCosine(x)	A+B/i	0.97994821
FresnelCosine_3_4_sin_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.94924514
FresnelCosine_4_4_sin_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.95701890
FresnelSine_1_4_sin_run1.txt	FresnelSine(x)	A+B*i	0.92729179

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine 2 4 sin run1.txt	FresnelSine(x)	A+B/i	0.98245795
FresnelSine 3 4 sin run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.90379983
FresnelSine 4 4 sin run1.txt	FresnelSine(x)	A+B*log(i)^4	0.93409087
J0x 1 4 sin run1.txt	J0(x)	A+B*i	0.98735381
J0x 2 4 sin run1.txt	J0(x)	A+B/i	0.99046612
J0x 3 4 sin run1.txt	J0(x)	A+B*sqrt(i)	0.99360912
J0x 4 4 sin run1.txt	J0(x)	A+B*log(i)^4	0.98741826
J1x 1 4 sin run1.txt	J1(x)	A+B*i	0.99490779
J1x 2 4 sin run1.txt	J1(x)	A+B/i	0.99981019
J1x 3 4 sin run1.txt	J1(x)	A+B*sqrt(i)	0.96499596
J1x 4 4 sin run1.txt	J1(x)	A+B*log(i)^4	0.98600732
J2x 1 4 sin run1.txt	J2(x)	A+B*i	0.99979212
J2x 2 4 sin run1.txt	J2(x)	A+B/i	0.99990476
J2x 3 4 sin run1.txt	J2(x)	A+B*sqrt(i)	0.93985923
J2x 4 4 sin run1.txt	J2(x)	A+B*log(i)^4	0.99973529
J3x 1 4 sin run1.txt	J3(x)	A+B*i	0.97603698
J3x 2 4 sin run1.txt	J3(x)	A+B/i	0.99834646
J3x 3 4 sin run1.txt	J3(x)	A+B*sqrt(i)	0.96666781
J3x 4 4 sin run1.txt	J3(x)	A+B*log(i)^4	0.97827729
J4x 1 4 sin run1.txt	J4(x)	A+B*i	0.92059717
J4x 2 4 sin run1.txt	J4(x)	A+B/i	0.99260141
J4x 3 4 sin run1.txt	J4(x)	A+B*sqrt(i)	0.91857501
J4x 4 4 sin run1.txt	J4(x)	A+B*log(i)^4	0.97305370
J5x 1 4 sin run1.txt	J5(x)	A+B*i	0.99375308
J5x 2 4 sin run1.txt	J5(x)	A+B/i	0.91906192
J5x 3 4 sin run1.txt	J5(x)	A+B*sqrt(i)	0.93675341
J5x 4 4 sin run1.txt	J5(x)	A+B*log(i)^4	0.79525184
ln 1 4 sin run1.txt	ln(x)	A+B*i	0.99997497
ln 2 4 sin run1.txt	ln(x)	A+B/i	0.99999895
ln 3 4 sin run1.txt	ln(x)	A+B*sqrt(i)	0.99999654
ln 4 4 sin run1.txt	ln(x)	A+B*log(i)^4	0.99999485
log10Gamma 1 4 sin run1.txt	log10Gamma(x)	A+B*i	0.99999899
log10Gamma 2 4 sin run1.txt	log10Gamma(x)	A+B/i	0.99999840
log10Gamma 3 4 sin run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999812
log10Gamma 4 4 sin run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999970
log 1 4 sin run1.txt	log(x)	A+B*i	0.99998488
log 2 4 sin run1.txt	log(x)	A+B/i	0.99999942
log 3 4 sin run1.txt	log(x)	A+B*sqrt(i)	0.99999915
log 4 4 sin run1.txt	log(x)	A+B*log(i)^4	0.99998697
pwr10 1 4 sin run1.txt	10^x	A+B*i	1.00000000
pwr10 2 4 sin run1.txt	10^x	A+B/i	1.00000000
pwr10 3 4 sin run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10 4 4 sin run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh 1 4 sin run1.txt	sinh(x)	A+B*i	0.99999999
sinh 2 4 sin run1.txt	sinh(x)	A+B/i	1.00000000
sinh 3 4 sin run1.txt	sinh(x)	A+B*sqrt(i)	0.99999996
sinh 4 4 sin run1.txt	sinh(x)	A+B*log(i)^4	0.99999998
Si 1 4 sin run1.txt	Si(x)	A+B*i	0.94511992
Si 2 4 sin run1.txt	Si(x)	A+B/i	0.95210987

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si 3 4 sin run1.txt	Si (x)	A+B*sqrt(i)	0.94345250
Si 4 4 sin run1.txt	Si (x)	A+B*log(i)^4	0.98919634
tanh 1 4 sin run1.txt	tanh(x)	A+B*i	1.00000000
tanh 2 4 sin run1.txt	tanh(x)	A+B/i	1.00000000
tanh 3 4 sin run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh 4 4 sin run1.txt	tanh(x)	A+B*log(i)^4	0.99999999
tan 1 4 sin run1.txt	tan(x)	A+B*i	1.00000000
tan 2 4 sin run1.txt	tan(x)	A+B/i	1.00000000
tan 3 4 sin run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan 4 4 sin run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl 1 4 sin run1.txt	tinvl(0.95,x)	A+B*i	0.89450422
tinvl 2 4 sin run1.txt	tinvl(0.95,x)	A+B/i	0.84425022
tinvl 3 4 sin run1.txt	tinvl(0.95,x)	A+B*sqrt(i)	0.90268097
tinvl 4 4 sin run1.txt	tinvl(0.95,x)	A+B*log(i)^4	0.92077180
tinvs 1 4 sin run1.txt	tinvs(0.975,x)	A+B*i	0.84871704
tinvs 2 4 sin run1.txt	tinvs(0.975,x)	A+B/i	0.84618412
tinvs 3 4 sin run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.88201635
tinvs 4 4 sin run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.90485848
trigamma 1 4 sin run1.txt	trigamma(x)	A+B*i	0.79756374
trigamma 2 4 sin run1.txt	trigamma(x)	A+B/i	0.77031310
trigamma 3 4 sin run1.txt	trigamma(x)	A+B*sqrt(i)	0.75238287
trigamma 4 4 sin run1.txt	trigamma(x)	A+B*log(i)^4	0.82420068

Sine Series of Order 5

The next table shows a summary of results for the Sine series of the order 5:

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + \dots$$

$$+ a_5 * \sin(S_5 * gx(5,A_5,B_5) + Os_5) + a_6 * x + a_7 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 5 Sine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_5_sin_run1.txt	acosh(x)	A+B*i	0.99512987
acosh_2_5_sin_run1.txt	acosh(x)	A+B/i	0.98987048
acosh_3_5_sin_run1.txt	acosh(x)	A+B*sqrt(i)	0.99571874
acosh_4_5_sin_run1.txt	acosh(x)	A+B*log(i)^4	0.99631729
arccos_1_5_sin_run1.txt	arccos(x)	A+B*i	0.99976715
arccos_2_5_sin_run1.txt	arccos(x)	A+B/i	0.99971083
arccos_3_5_sin_run1.txt	arccos(x)	A+B*sqrt(i)	0.99975084
arccos_4_5_sin_run1.txt	arccos(x)	A+B*log(i)^4	0.99975168
arcsin_1_5_sin_run1.txt	arcsin(x)	A+B*i	0.99976694
arcsin_2_5_sin_run1.txt	arcsin(x)	A+B/i	0.99977378
arcsin_3_5_sin_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99973022
arcsin_4_5_sin_run1.txt	arcsin(x)	A+B*log(i)^4	0.99975805
arctan_1_5_sin_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_5_sin_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_5_sin_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_5_sin_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_5_sin_run1.txt	asinh(x)	A+B*i	0.99817024
asinh_2_5_sin_run1.txt	asinh(x)	A+B/i	0.99032216
asinh_3_5_sin_run1.txt	asinh(x)	A+B*sqrt(i)	0.99102352
asinh_4_5_sin_run1.txt	asinh(x)	A+B*log(i)^4	0.99444381
atanh_1_5_sin_run1.txt	atanh(x)	A+B*i	0.99582578
atanh_2_5_sin_run1.txt	atanh(x)	A+B/i	0.99603665
atanh_3_5_sin_run1.txt	atanh(x)	A+B*sqrt(i)	0.99566207
atanh_4_5_sin_run1.txt	atanh(x)	A+B*log(i)^4	0.99595192
CI_1_5_sin_run1.txt	Ci(x)	A+B*i	0.96748929
Ci_2_5_sin_run1.txt	Ci(x)	A+B/i	0.98023673
Ci_3_5_sin_run1.txt	Ci(x)	A+B*sqrt(i)	0.95448873
CI_4_5_sin_run1.txt	Ci(x)	A+B*log(i)^4	0.99051943
cosh_1_5_sin_run1.txt	cosh(x)	A+B*i	0.99999880
cosh_2_5_sin_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_5_sin_run1.txt	cosh(x)	A+B*sqrt(i)	1.00000000
cosh_4_5_sin_run1.txt	cosh(x)	A+B*log(i)^4	0.99999999
digamma_2_5_sin_run1.txt	digamma(x)	A+B/i	0.99583642
digamma_1_5_sin_run1.txt	digamma(x)	A+B*i	0.99968902
digamma_3_5_sin_run1.txt	digamma(x)	A+B*sqrt(i)	0.99842982
digamma_4_5_sin_run1.txt	digamma(x)	A+B*log(i)^4	0.99918288
erf_1_5_sin_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_5_sin_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_5_sin_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_5_sin_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_5_sin_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_5_sin_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_5_sin_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_5_sin_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_5_sin_run1.txt	FresnelCosine(x)	A+B*i	0.94776869
FresnelCosine_2_5_sin_run1.txt	FresnelCosine(x)	A+B/i	0.99651974
FresnelCosine_3_5_sin_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.93225788
FresnelCosine_4_5_sin_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.91690157
FresnelSine_1_5_sin_run1.txt	FresnelSine(x)	A+B*i	0.99573820

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine 2 5 sin run1.txt	FresnelSine(x)	A+B/i	0.94972773
FresnelSine 3 5 sin run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.96611958
FresnelSine 4 5 sin run1.txt	FresnelSine(x)	A+B*log(i)^4	0.93616550
J0x 1 5 sin run1.txt	J0(x)	A+B*i	0.99275982
J0x 2 5 sin run1.txt	J0(x)	A+B/i	0.98794369
J0x 3 5 sin run1.txt	J0(x)	A+B*sqrt(i)	0.98076393
J0x 4 5 sin run1.txt	J0(x)	A+B*log(i)^4	0.99925986
J1x 1 5 sin run1.txt	J1(x)	A+B*i	0.98785806
J1x 2 5 sin run1.txt	J1(x)	A+B/i	0.98939534
J1x 3 5 sin run1.txt	J1(x)	A+B*sqrt(i)	0.96196886
J1x 4 5 sin run1.txt	J1(x)	A+B*log(i)^4	0.98339692
J2x 1 5 sin run1.txt	J2(x)	A+B*i	0.99344172
J2x 2 5 sin run1.txt	J2(x)	A+B/i	0.99230321
J2x 3 5 sin run1.txt	J2(x)	A+B*sqrt(i)	0.97804340
J2x 4 5 sin run1.txt	J2(x)	A+B*log(i)^4	0.99993707
J3x 1 5 sin run1.txt	J3(x)	A+B*i	0.99745178
J3x 2 5 sin run1.txt	J3(x)	A+B/i	0.99796008
J3x 3 5 sin run1.txt	J3(x)	A+B*sqrt(i)	0.99887963
J3x 4 5 sin run1.txt	J3(x)	A+B*log(i)^4	0.97851949
J4x 1 5 sin run1.txt	J4(x)	A+B*i	0.98083666
J4x 2 5 sin run1.txt	J4(x)	A+B/i	0.99987520
J4x 3 5 sin run1.txt	J4(x)	A+B*sqrt(i)	0.99789900
J4x 4 5 sin run1.txt	J4(x)	A+B*log(i)^4	0.99907524
J5x 1 5 sin run1.txt	J5(x)	A+B*i	0.82395691
J5x 2 5 sin run1.txt	J5(x)	A+B/i	0.99961876
J5x 3 5 sin run1.txt	J5(x)	A+B*sqrt(i)	0.97124371
J5x 4 5 sin run1.txt	J5(x)	A+B*log(i)^4	0.84234350
ln 1 5 sin run1.txt	ln(x)	A+B*i	0.99998595
ln 2 5 sin run1.txt	ln(x)	A+B/i	0.99999982
ln 3 5 sin run1.txt	ln(x)	A+B*sqrt(i)	0.99999459
ln 4 5 sin run1.txt	ln(x)	A+B*log(i)^4	0.99999588
log10Gamma 1 5 sin run1.txt	log10Gamma(x)	A+B*i	0.99999979
log10Gamma 2 5 sin run1.txt	log10Gamma(x)	A+B/i	0.99999452
log10Gamma 3 5 sin run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999926
log10Gamma 4 5 sin run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999964
log 1 5 sin run1.txt	log(x)	A+B*i	0.99999221
log 2 5 sin run1.txt	log(x)	A+B/i	0.99999987
log 3 5 sin run1.txt	log(x)	A+B*sqrt(i)	0.99999796
log 4 5 sin run1.txt	log(x)	A+B*log(i)^4	0.99999396
pwr10 1 5 sin run1.txt	10^x	A+B*i	1.00000000
pwr10 2 5 sin run1.txt	10^x	A+B/i	1.00000000
pwr10 3 5 sin run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10 4 5 sin run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh 1 5 sin run1.txt	sinh(x)	A+B*i	0.99999950
sinh 2 5 sin run1.txt	sinh(x)	A+B/i	1.00000000
sinh 3 5 sin run1.txt	sinh(x)	A+B*sqrt(i)	1.00000000
sinh 4 5 sin run1.txt	sinh(x)	A+B*log(i)^4	0.99999996
Si 1 5 sin run1.txt	Si(x)	A+B*i	0.96794830
Si 2 5 sin run1.txt	Si(x)	A+B/i	0.96149188

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si_3_5_sin_run1.txt	Si(x)	A+B*sqrt(i)	0.98792652
Si_4_5_sin_run1.txt	Si(x)	A+B*log(i)^4	0.94780205
tanh_1_5_sin_run1.txt	tanh(x)	A+B*i	0.99999999
tanh_2_5_sin_run1.txt	tanh(x)	A+B/i	1.00000000
tanh_3_5_sin_run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh_4_5_sin_run1.txt	tanh(x)	A+B*log(i)^4	1.00000000
tan_1_5_sin_run1.txt	tan(x)	A+B*i	1.00000000
tan_2_5_sin_run1.txt	tan(x)	A+B/i	1.00000000
tan_3_5_sin_run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan_4_5_sin_run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl_1_5_sin_run1.txt	tinvl(0.95,x)	A+B*i	0.89096396
tinvl_2_5_sin_run1.txt	tinvl(0.95,x)	A+B/i	0.89012785
tinvl_3_5_sin_run1.txt	tinvl(0.95,x)	A+B*sqrt(i)	0.89772640
tinvl_4_5_sin_run1.txt	tinvl(0.95,x)	A+B*log(i)^4	0.89976121
tinvt_1_5_sin_run1.txt	tinvt(0.975,x)	A+B*i	0.83714524
tinvt_2_5_sin_run1.txt	tinvt(0.975,x)	A+B/i	0.83596517
tinvt_3_5_sin_run1.txt	tinvt(0.975,x)	A+B*sqrt(i)	0.88723828
tinvt_4_5_sin_run1.txt	tinvt(0.975,x)	A+B*log(i)^4	0.93739619
trigamma_1_5_sin_run1.txt	trigamma(x)	A+B*i	0.79614991
trigamma_2_5_sin_run1.txt	trigamma(x)	A+B/i	0.71071563
trigamma_3_5_sin_run1.txt	trigamma(x)	A+B*sqrt(i)	0.78429773
trigamma_4_5_sin_run1.txt	trigamma(x)	A+B*log(i)^4	0.79922033

Sine Series of Order 6

The next table shows a summary of results for the Sine series of the order 6:

$$Y = a_0 + a_1 * \sin(S_1 * gx(1, A_1, B_1) + Os_1) + \dots$$

$$+ a_6 * \sin(S_6 * gx(6, A_6, B_6) + Os_6) + a_7 * x + a_8 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 6 Sine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_6_sin_run1.txt	acosh(x)	A+B*i	0.99513304
acosh_2_6_sin_run1.txt	acosh(x)	A+B/i	0.98957345
acosh_3_6_sin_run1.txt	acosh(x)	A+B*sqrt(i)	0.99499042
acosh_4_6_sin_run1.txt	acosh(x)	A+B*log(i)^4	0.99640776
arccos_1_6_sin_run1.txt	arccos(x)	A+B*i	0.99980338
arccos_2_6_sin_run1.txt	arccos(x)	A+B/i	0.99981182
arccos_3_6_sin_run1.txt	arccos(x)	A+B*sqrt(i)	0.99981957
arccos_4_6_sin_run1.txt	arccos(x)	A+B*log(i)^4	0.99975924
arcsin_1_6_sin_run1.txt	arcsin(x)	A+B*i	0.99981425
arcsin_2_6_sin_run1.txt	arcsin(x)	A+B/i	0.99981734
arcsin_3_6_sin_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99981577
arcsin_4_6_sin_run1.txt	arcsin(x)	A+B*log(i)^4	0.99978135
arctan_1_6_sin_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_6_sin_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_6_sin_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_6_sin_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_6_sin_run1.txt	asinh(x)	A+B*i	0.99793173
asinh_2_6_sin_run1.txt	asinh(x)	A+B/i	0.99179302
asinh_3_6_sin_run1.txt	asinh(x)	A+B*sqrt(i)	0.99442951
asinh_4_6_sin_run1.txt	asinh(x)	A+B*log(i)^4	0.99699050
atanh_1_6_sin_run1.txt	atanh(x)	A+B*i	0.99665776
atanh_2_6_sin_run1.txt	atanh(x)	A+B/i	0.99689535
atanh_3_6_sin_run1.txt	atanh(x)	A+B*sqrt(i)	0.99688704
atanh_4_6_sin_run1.txt	atanh(x)	A+B*log(i)^4	0.99632666
CI_1_6_sin_run1.txt	Ci(x)	A+B*i	0.93243293
Ci_2_6_sin_run1.txt	Ci(x)	A+B/i	0.96645069
Ci_3_6_sin_run1.txt	Ci(x)	A+B*sqrt(i)	0.94374711
CI_4_6_sin_run1.txt	Ci(x)	A+B*log(i)^4	0.91589672
cosh_1_6_sin_run1.txt	cosh(x)	A+B*i	0.99999881
cosh_2_6_sin_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_6_sin_run1.txt	cosh(x)	A+B*sqrt(i)	1.00000000
cosh_4_6_sin_run1.txt	cosh(x)	A+B*log(i)^4	0.99999998
digamma_2_6_sin_run1.txt	digamma(x)	A+B/i	0.99865011
digamma_1_6_sin_run1.txt	digamma(x)	A+B*i	0.99963592
digamma_3_6_sin_run1.txt	digamma(x)	A+B*sqrt(i)	0.99777777
digamma_4_6_sin_run1.txt	digamma(x)	A+B*log(i)^4	0.99936023
erf_1_6_sin_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_6_sin_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_6_sin_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_6_sin_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_6_sin_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_6_sin_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_6_sin_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_6_sin_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_6_sin_run1.txt	FresnelCosine(x)	A+B*i	0.94766818
FresnelCosine_2_6_sin_run1.txt	FresnelCosine(x)	A+B/i	0.99041126
FresnelCosine_3_6_sin_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.99385875
FresnelCosine_4_6_sin_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.95733192
FresnelSine_1_6_sin_run1.txt	FresnelSine(x)	A+B*i	0.98652718

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine 2 6 sin run1.txt	FresnelSine(x)	A+B/i	0.99431151
FresnelSine 3 6 sin run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.98922167
FresnelSine 4 6 sin run1.txt	FresnelSine(x)	A+B*log(i)^4	0.99628154
J0x 1 6 sin run1.txt	J0(x)	A+B*i	0.96854236
J0x 2 6 sin run1.txt	J0(x)	A+B/i	0.99549269
J0x 3 6 sin run1.txt	J0(x)	A+B*sqrt(i)	0.99770696
J0x 4 6 sin run1.txt	J0(x)	A+B*log(i)^4	0.98803909
J1x 1 6 sin run1.txt	J1(x)	A+B*i	0.94618314
J1x 2 6 sin run1.txt	J1(x)	A+B/i	0.99984721
J1x 3 6 sin run1.txt	J1(x)	A+B*sqrt(i)	0.99273079
J1x 4 6 sin run1.txt	J1(x)	A+B*log(i)^4	0.96794168
J2x 1 6 sin run1.txt	J2(x)	A+B*i	0.91972855
J2x 2 6 sin run1.txt	J2(x)	A+B/i	0.99996051
J2x 3 6 sin run1.txt	J2(x)	A+B*sqrt(i)	0.95933682
J2x 4 6 sin run1.txt	J2(x)	A+B*log(i)^4	0.98260888
J3x 1 6 sin run1.txt	J3(x)	A+B*i	0.97105143
J3x 2 6 sin run1.txt	J3(x)	A+B/i	0.97769578
J3x 3 6 sin run1.txt	J3(x)	A+B*sqrt(i)	0.99916456
J3x 4 6 sin run1.txt	J3(x)	A+B*log(i)^4	0.98764805
J4x 1 6 sin run1.txt	J4(x)	A+B*i	0.90866976
J4x 2 6 sin run1.txt	J4(x)	A+B/i	0.95901412
J4x 3 6 sin run1.txt	J4(x)	A+B*sqrt(i)	0.96257472
J4x 4 6 sin run1.txt	J4(x)	A+B*log(i)^4	0.94857531
J5x 1 6 sin run1.txt	J5(x)	A+B*i	0.91415105
J5x 2 6 sin run1.txt	J5(x)	A+B/i	0.95867429
J5x 3 6 sin run1.txt	J5(x)	A+B*sqrt(i)	0.99163390
J5x 4 6 sin run1.txt	J5(x)	A+B*log(i)^4	0.99930639
ln 1 6 sin run1.txt	ln(x)	A+B*i	0.99998111
ln 2 6 sin run1.txt	ln(x)	A+B/i	0.99999998
ln 3 6 sin run1.txt	ln(x)	A+B*sqrt(i)	0.99999224
ln 4 6 sin run1.txt	ln(x)	A+B*log(i)^4	0.99999384
log10Gamma 1 6 sin run1.txt	log10Gamma(x)	A+B*i	0.99999869
log10Gamma 2 6 sin run1.txt	log10Gamma(x)	A+B/i	0.99999936
log10Gamma 3 6 sin run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999931
log10Gamma 4 6 sin run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999961
log 1 6 sin run1.txt	log(x)	A+B*i	0.99998283
log 2 6 sin run1.txt	log(x)	A+B/i	0.99999996
log 3 6 sin run1.txt	log(x)	A+B*sqrt(i)	0.99999641
log 4 6 sin run1.txt	log(x)	A+B*log(i)^4	0.99999222
pwr10 1 6 sin run1.txt	10^x	A+B*i	1.00000000
pwr10 2 6 sin run1.txt	10^x	A+B/i	1.00000000
pwr10 3 6 sin run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10 4 6 sin run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh 1 6 sin run1.txt	sinh(x)	A+B*i	0.99999935
sinh 2 6 sin run1.txt	sinh(x)	A+B/i	1.00000000
sinh 3 6 sin run1.txt	sinh(x)	A+B*sqrt(i)	1.00000000
sinh 4 6 sin run1.txt	sinh(x)	A+B*log(i)^4	0.99999998
Si 1 6 sin run1.txt	Si(x)	A+B*i	0.99973171
Si 2 6 sin run1.txt	Si(x)	A+B/i	0.99199633

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si_3_6_sin_run1.txt	Si(x)	A+B*sqrt(i)	0.98830628
Si_4_6_sin_run1.txt	Si(x)	A+B*log(i)^4	0.99501866
tanh_1_6_sin_run1.txt	tanh(x)	A+B*i	0.99999999
tanh_2_6_sin_run1.txt	tanh(x)	A+B/i	1.00000000
tanh_3_6_sin_run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh_4_6_sin_run1.txt	tanh(x)	A+B*log(i)^4	1.00000000
tan_1_6_sin_run1.txt	tan(x)	A+B*i	1.00000000
tan_2_6_sin_run1.txt	tan(x)	A+B/i	1.00000000
tan_3_6_sin_run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan_4_6_sin_run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl_1_6_sin_run1.txt	tinvs(0.95,x)	A+B*i	0.86310988
tinvl_2_6_sin_run1.txt	tinvs(0.95,x)	A+B/i	0.88535591
tinvl_3_6_sin_run1.txt	tinvs(0.95,x)	A+B*sqrt(i)	0.90061242
tinvl_4_6_sin_run1.txt	tinvs(0.95,x)	A+B*log(i)^4	0.88510321
tinvs2_1_6_sin_run1.txt	tinvs(0.975,x)	A+B*i	0.84299903
tinvs2_2_6_sin_run1.txt	tinvs(0.975,x)	A+B/i	0.96329909
tinvs2_3_6_sin_run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.85212527
tinvs2_4_6_sin_run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.84753668
trigamma_1_6_sin_run1.txt	trigamma(x)	A+B*i	0.72731477
trigamma_2_6_sin_run1.txt	trigamma(x)	A+B/i	0.80362248
trigamma_3_6_sin_run1.txt	trigamma(x)	A+B*sqrt(i)	0.73399208
trigamma_4_6_sin_run1.txt	trigamma(x)	A+B*log(i)^4	0.82494681

Sine Series of Order 7

The next table shows a summary of results for the Sine series of the order 7:

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + \dots$$

$$+ a_7 * \sin(S_7 * gx(7,A_7,B_7) + Os_7) + a_8 * x + a_9 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 7 Sine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh 1 7 sin run1.txt	acosh(x)	A+B*i	0.99611420
acosh 2 7 sin run1.txt	acosh(x)	A+B/i	0.99491841
acosh 3 7 sin run1.txt	acosh(x)	A+B*sqrt(i)	0.99761615
acosh 4 7 sin run1.txt	acosh(x)	A+B*log(i)^4	0.99701995
arccos 1 7 sin run1.txt	arccos(x)	A+B*i	0.99989409
arccos 2 7 sin run1.txt	arccos(x)	A+B/i	0.99985835
arccos 3 7 sin run1.txt	arccos(x)	A+B*sqrt(i)	0.99986965
arccos 4 7 sin run1.txt	arccos(x)	A+B*log(i)^4	0.99980743
arcsin 1 7 sin run1.txt	arcsin(x)	A+B*i	0.99986488
arcsin 2 7 sin run1.txt	arcsin(x)	A+B/i	0.99985962
arcsin 3 7 sin run1.txt	arcsin(x)	A+B*sqrt(i)	0.99988605
arcsin 4 7 sin run1.txt	arcsin(x)	A+B*log(i)^4	0.99985151
arctan 1 7 sin run1.txt	arctan(x)	A+B*i	1.00000000
arctan 2 7 sin run1.txt	arctan(x)	A+B/i	1.00000000
arctan 3 7 sin run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan 4 7 sin run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh 1 7 sin run1.txt	asinh(x)	A+B*i	0.99065959
asinh 2 7 sin run1.txt	asinh(x)	A+B/i	0.99623811
asinh 3 7 sin run1.txt	asinh(x)	A+B*sqrt(i)	0.99608981
asinh 4 7 sin run1.txt	asinh(x)	A+B*log(i)^4	0.99423326
atanh 1 7 sin run1.txt	atanh(x)	A+B*i	0.99653317
atanh 2 7 sin run1.txt	atanh(x)	A+B/i	0.99745348
atanh 3 7 sin run1.txt	atanh(x)	A+B*sqrt(i)	0.99768239
atanh 4 7 sin run1.txt	atanh(x)	A+B*log(i)^4	0.99683225
CI 1 7 sin run1.txt	Ci(x)	A+B*i	0.99908799
Ci 2 7 sin run1.txt	Ci(x)	A+B/i	0.99845581
Ci 3 7 sin run1.txt	Ci(x)	A+B*sqrt(i)	0.87853197
CI 4 7 sin run1.txt	Ci(x)	A+B*log(i)^4	0.96999592
cosh 1 7 sin run1.txt	cosh(x)	A+B*i	0.99999996
cosh 2 7 sin run1.txt	cosh(x)	A+B/i	1.00000000
cosh 3 7 sin run1.txt	cosh(x)	A+B*sqrt(i)	1.00000000
cosh 4 7 sin run1.txt	cosh(x)	A+B*log(i)^4	0.99999998
digamma 2 7 sin run1.txt	digamma(x)	A+B/i	0.99953534
digamma 1 7 sin run1.txt	digamma(x)	A+B*i	0.99846305
digamma 3 7 sin run1.txt	digamma(x)	A+B*sqrt(i)	0.99933909
digamma 4 7 sin run1.txt	digamma(x)	A+B*log(i)^4	0.99931270
erf 1 7 sin run1.txt	erf(x)	A+B*i	1.00000000
erf 2 7 sin run1.txt	erf(x)	A+B/i	1.00000000
erf 3 7 sin run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf 4 7 sin run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp 1 7 sin run1.txt	exp(x)	A+B*i	1.00000000
exp 2 7 sin run1.txt	exp(x)	A+B/i	1.00000000
exp 3 7 sin run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp 4 7 sin run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine 1 7 sin run1.txt	FresnelCosine(x)	A+B*i	0.98704839
FresnelCosine 2 7 sin run1.txt	FresnelCosine(x)	A+B/i	0.99708902
FresnelCosine 3 7 sin run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.99942234
FresnelCosine 4 7 sin run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.98536958
FresnelSine 1 7 sin run1.txt	FresnelSine(x)	A+B*i	0.94495324

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine 2 7 sin run1.txt	FresnelSine(x)	A+B/i	0.99104565
FresnelSine 3 7 sin run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.99056818
FresnelSine 4 7 sin run1.txt	FresnelSine(x)	A+B*log(i)^4	0.99984511
J0x 1 7 sin run1.txt	J0(x)	A+B*i	0.96804216
J0x 2 7 sin run1.txt	J0(x)	A+B/i	0.99928547
J0x 3 7 sin run1.txt	J0(x)	A+B*sqrt(i)	0.99940333
J0x 4 7 sin run1.txt	J0(x)	A+B*log(i)^4	0.97824090
J1x 1 7 sin run1.txt	J1(x)	A+B*i	0.99890378
J1x 2 7 sin run1.txt	J1(x)	A+B/i	0.99367555
J1x 3 7 sin run1.txt	J1(x)	A+B*sqrt(i)	0.99527476
J1x 4 7 sin run1.txt	J1(x)	A+B*log(i)^4	0.99228765
J2x 1 7 sin run1.txt	J2(x)	A+B*i	0.99604085
J2x 2 7 sin run1.txt	J2(x)	A+B/i	0.98118450
J2x 3 7 sin run1.txt	J2(x)	A+B*sqrt(i)	0.99419357
J2x 4 7 sin run1.txt	J2(x)	A+B*log(i)^4	0.99999106
J3x 1 7 sin run1.txt	J3(x)	A+B*i	0.99534760
J3x 2 7 sin run1.txt	J3(x)	A+B/i	0.98577929
J3x 3 7 sin run1.txt	J3(x)	A+B*sqrt(i)	0.96309165
J3x 4 7 sin run1.txt	J3(x)	A+B*log(i)^4	0.99735070
J4x 1 7 sin run1.txt	J4(x)	A+B*i	0.93142109
J4x 2 7 sin run1.txt	J4(x)	A+B/i	0.99999713
J4x 3 7 sin run1.txt	J4(x)	A+B*sqrt(i)	0.96405433
J4x 4 7 sin run1.txt	J4(x)	A+B*log(i)^4	0.99997203
J5x 1 7 sin run1.txt	J5(x)	A+B*i	0.99237049
J5x 2 7 sin run1.txt	J5(x)	A+B/i	0.95671813
J5x 3 7 sin run1.txt	J5(x)	A+B*sqrt(i)	0.95806920
J5x 4 7 sin run1.txt	J5(x)	A+B*log(i)^4	0.99961959
ln 1 7 sin run1.txt	ln(x)	A+B*i	0.99999037
ln 2 7 sin run1.txt	ln(x)	A+B/i	0.99999999
ln 3 7 sin run1.txt	ln(x)	A+B*sqrt(i)	0.99998763
ln 4 7 sin run1.txt	ln(x)	A+B*log(i)^4	0.99999973
log10Gamma 1 7 sin run1.txt	log10Gamma(x)	A+B*i	0.99999986
log10Gamma 2 7 sin run1.txt	log10Gamma(x)	A+B/i	0.99999591
log10Gamma 3 7 sin run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999905
log10Gamma 4 7 sin run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999982
log 1 7 sin run1.txt	log(x)	A+B*i	0.99998526
log 2 7 sin run1.txt	log(x)	A+B/i	0.99999999
log 3 7 sin run1.txt	log(x)	A+B*sqrt(i)	0.99999353
log 4 7 sin run1.txt	log(x)	A+B*log(i)^4	0.99999874
pwr10 1 7 sin run1.txt	10^x	A+B*i	1.00000000
pwr10 2 7 sin run1.txt	10^x	A+B/i	1.00000000
pwr10 3 7 sin run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10 4 7 sin run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh 1 7 sin run1.txt	sinh(x)	A+B*i	0.99999945
sinh 2 7 sin run1.txt	sinh(x)	A+B/i	1.00000000
sinh 3 7 sin run1.txt	sinh(x)	A+B*sqrt(i)	1.00000000
sinh 4 7 sin run1.txt	sinh(x)	A+B*log(i)^4	1.00000000
Si 1 7 sin run1.txt	Si(x)	A+B*i	0.97620992
Si 2 7 sin run1.txt	Si(x)	A+B/i	0.99735049

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si 3 7 sin run1.txt	Si (x)	A+B*sqrt(i)	0.99621505
Si 4 7 sin run1.txt	Si (x)	A+B*log(i)^4	0.99306789
tanh 1 7 sin run1.txt	tanh(x)	A+B*i	0.99999980
tanh 2 7 sin run1.txt	tanh(x)	A+B/i	1.00000000
tanh 3 7 sin run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh 4 7 sin run1.txt	tanh(x)	A+B*log(i)^4	1.00000000
tan 1 7 sin run1.txt	tan(x)	A+B*i	1.00000000
tan 2 7 sin run1.txt	tan(x)	A+B/i	1.00000000
tan 3 7 sin run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan 4 7 sin run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl 1 7 sin run1.txt	tinvs(0.95,x)	A+B*i	0.88053403
tinvl 2 7 sin run1.txt	tinvs(0.95,x)	A+B/i	0.97977308
tinvl 3 7 sin run1.txt	tinvs(0.95,x)	A+B*sqrt(i)	0.87251273
tinvl 4 7 sin run1.txt	tinvs(0.95,x)	A+B*log(i)^4	0.94786642
tinvs2 1 7 sin run1.txt	tinvs(0.975,x)	A+B*i	0.91419442
tinvs2 2 7 sin run1.txt	tinvs(0.975,x)	A+B/i	0.89332417
tinvs2 3 7 sin run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.91154218
tinvs2 4 7 sin run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.94462241
trigamma 1 7 sin run1.txt	trigamma(x)	A+B*i	0.81495906
trigamma 2 7 sin run1.txt	trigamma(x)	A+B/i	0.80519118
trigamma 3 7 sin run1.txt	trigamma(x)	A+B*sqrt(i)	0.76920280
trigamma 4 7 sin run1.txt	trigamma(x)	A+B*log(i)^4	0.79674062

Cosine Series of Order 3

The next table shows a summary of results for the Sine series of the order 3:

$$Y = a_0 + a_1 * \cos(C_1 * gx(1,A_1,B_1) + Oc_1) + \dots$$

$$+ a_3 * \cos(C_3 * gx(3,A_3,B_3) + Oc_3) + a_4*x + a_5*x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 3 Cosine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_3_cos_run1.txt	acosh(x)	A+B*i	0.99173699
acosh_2_3_cos_run1.txt	acosh(x)	A+B/i	0.99159887
acosh_3_3_cos_run1.txt	acosh(x)	A+B*sqrt(i)	0.98636344
acosh_4_3_cos_run1.txt	acosh(x)	A+B*log(i)^4	0.99455461
arccos_1_3_cos_run1.txt	arccos(x)	A+B*i	0.99950649
arccos_2_3_cos_run1.txt	arccos(x)	A+B/i	0.99945658
arccos_3_3_cos_run1.txt	arccos(x)	A+B*sqrt(i)	0.99952356
arccos_4_3_cos_run1.txt	arccos(x)	A+B*log(i)^4	0.99947196
arcsin_1_3_cos_run1.txt	arcsin(x)	A+B*i	0.99952320
arcsin_2_3_cos_run1.txt	arcsin(x)	A+B/i	0.99943048
arcsin_3_3_cos_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99950965
arcsin_4_3_cos_run1.txt	arcsin(x)	A+B*log(i)^4	0.99950470
arctan_1_3_cos_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_3_cos_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_3_cos_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_3_cos_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_3_cos_run1.txt	asinh(x)	A+B*i	0.99362041
asinh_2_3_cos_run1.txt	asinh(x)	A+B/i	0.98544734
asinh_3_3_cos_run1.txt	asinh(x)	A+B*sqrt(i)	0.98377087
asinh_4_3_cos_run1.txt	asinh(x)	A+B*log(i)^4	0.99422766
atanh_1_3_cos_run1.txt	atanh(x)	A+B*i	0.99232246
atanh_2_3_cos_run1.txt	atanh(x)	A+B/i	0.99283496
atanh_3_3_cos_run1.txt	atanh(x)	A+B*sqrt(i)	0.99177091
atanh_4_3_cos_run1.txt	atanh(x)	A+B*log(i)^4	0.99245979
CI_1_3_cos_run1.txt	Ci(x)	A+B*i	0.96335195
Ci_2_3_cos_run1.txt	Ci(x)	A+B/i	0.94877919
Ci_3_3_cos_run1.txt	Ci(x)	A+B*sqrt(i)	0.95204266
CI_4_3_cos_run1.txt	Ci(x)	A+B*log(i)^4	0.89949023
cosh_1_3_cos_run1.txt	cosh(x)	A+B*i	0.99999969
cosh_2_3_cos_run1.txt	cosh(x)	A+B/i	0.99999989
cosh_3_3_cos_run1.txt	cosh(x)	A+B*sqrt(i)	0.99999994
cosh_4_3_cos_run1.txt	cosh(x)	A+B*log(i)^4	0.99999997
digamma_2_3_cos_run1.txt	digamma(x)	A+B/i	0.99654646
digamma_1_3_cos_run1.txt	digamma(x)	A+B*i	0.99860972
digamma_3_3_cos_run1.txt	digamma(x)	A+B*sqrt(i)	0.99342614
digamma_4_3_cos_run1.txt	digamma(x)	A+B*log(i)^4	0.99826352
erf_1_3_cos_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_3_cos_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_3_cos_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_3_cos_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_3_cos_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_3_cos_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_3_cos_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_3_cos_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_3_cos_run1.txt	FresnelCosine(x)	A+B*i	0.93821198
FresnelCosine_2_3_cos_run1.txt	FresnelCosine(x)	A+B/i	0.92482218
FresnelCosine_3_3_cos_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.93824438
FresnelCosine_4_3_cos_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.77801761
FresnelSine_1_3_cos_run1.txt	FresnelSine(x)	A+B*i	0.91825485

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine 2 3 cos run1.txt	FresnelSine(x)	A+B/i	0.92600540
FresnelSine 3 3 cos run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.88886029
FresnelSine 4 3 cos run1.txt	FresnelSine(x)	A+B*log(i)^4	0.93366563
J0x 1 3 cos run1.txt	J0(x)	A+B*i	0.98493472
J0x 2 3 cos run1.txt	J0(x)	A+B/i	0.98078199
J0x 3 3 cos run1.txt	J0(x)	A+B*sqrt(i)	0.98449236
J0x 4 3 cos run1.txt	J0(x)	A+B*log(i)^4	0.98441624
J1x 1 3 cos run1.txt	J1(x)	A+B*i	0.98957078
J1x 2 3 cos run1.txt	J1(x)	A+B/i	0.97199254
J1x 3 3 cos run1.txt	J1(x)	A+B*sqrt(i)	0.95341014
J1x 4 3 cos run1.txt	J1(x)	A+B*log(i)^4	0.97196580
J2x 1 3 cos run1.txt	J2(x)	A+B*i	0.97303424
J2x 2 3 cos run1.txt	J2(x)	A+B/i	0.94074968
J2x 3 3 cos run1.txt	J2(x)	A+B*sqrt(i)	0.96760870
J2x 4 3 cos run1.txt	J2(x)	A+B*log(i)^4	0.99055354
J3x 1 3 cos run1.txt	J3(x)	A+B*i	0.93450923
J3x 2 3 cos run1.txt	J3(x)	A+B/i	0.94549812
J3x 3 3 cos run1.txt	J3(x)	A+B*sqrt(i)	0.94041998
J3x 4 3 cos run1.txt	J3(x)	A+B*log(i)^4	0.97740667
J4x 1 3 cos run1.txt	J4(x)	A+B*i	0.91881762
J4x 2 3 cos run1.txt	J4(x)	A+B/i	0.96867402
J4x 3 3 cos run1.txt	J4(x)	A+B*sqrt(i)	0.96395988
J4x 4 3 cos run1.txt	J4(x)	A+B*log(i)^4	0.98096486
J5x 1 3 cos run1.txt	J5(x)	A+B*i	0.66879123
J5x 2 3 cos run1.txt	J5(x)	A+B/i	0.83159630
J5x 3 3 cos run1.txt	J5(x)	A+B*sqrt(i)	0.83155449
J5x 4 3 cos run1.txt	J5(x)	A+B*log(i)^4	0.96758557
ln 1 3 cos run1.txt	ln(x)	A+B*i	0.99997633
ln 2 3 cos run1.txt	ln(x)	A+B/i	0.99999647
ln 3 3 cos run1.txt	ln(x)	A+B*sqrt(i)	0.99999634
ln 4 3 cos run1.txt	ln(x)	A+B*log(i)^4	0.99999635
log10Gamma 1 3 cos run1.txt	log10Gamma(x)	A+B*i	0.99999889
log10Gamma 2 3 cos run1.txt	log10Gamma(x)	A+B/i	0.99999155
log10Gamma 3 3 cos run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999110
log10Gamma 4 3 cos run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999889
log 1 3 cos run1.txt	log(x)	A+B*i	0.99998361
log 2 3 cos run1.txt	log(x)	A+B/i	0.99999568
log 3 3 cos run1.txt	log(x)	A+B*sqrt(i)	0.99999691
log 4 3 cos run1.txt	log(x)	A+B*log(i)^4	0.99999556
pwr10 1 3 cos run1.txt	10^x	A+B*i	1.00000000
pwr10 2 3 cos run1.txt	10^x	A+B/i	1.00000000
pwr10 3 3 cos run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10 4 3 cos run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh 1 3 cos run1.txt	sinh(x)	A+B*i	0.99999970
sinh 2 3 cos run1.txt	sinh(x)	A+B/i	0.99999998
sinh 3 3 cos run1.txt	sinh(x)	A+B*sqrt(i)	1.00000000
sinh 4 3 cos run1.txt	sinh(x)	A+B*log(i)^4	0.99999998
Si 1 3 cos run1.txt	Si(x)	A+B*i	0.91956463
Si 2 3 cos run1.txt	Si(x)	A+B/i	0.94740143

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si 3 3 cos run1.txt	Si (x)	A+B*sqrt(i)	0.97252660
Si 4 3 cos run1.txt	Si (x)	A+B*log(i)^4	0.96598494
tanh 1 3 cos run1.txt	tanh (x)	A+B*i	0.99999993
tanh 2 3 cos run1.txt	tanh (x)	A+B/i	0.99999984
tanh 3 3 cos run1.txt	tanh (x)	A+B*sqrt(i)	0.99999997
tanh 4 3 cos run1.txt	tanh (x)	A+B*log(i)^4	0.99999988
tan 1 3 cos run1.txt	tan (x)	A+B*i	0.99999999
tan 2 3 cos run1.txt	tan (x)	A+B/i	0.99999999
tan 3 3 cos run1.txt	tan (x)	A+B*sqrt(i)	0.99999999
tan 4 3 cos run1.txt	tan (x)	A+B*log(i)^4	0.99999999
tinvl 1 3 cos run1.txt	tinvl(0.95,x)	A+B*i	0.88959617
tinvl 2 3 cos run1.txt	tinvl(0.95,x)	A+B/i	0.87297177
tinvl 3 3 cos run1.txt	tinvl(0.95,x)	A+B*sqrt(i)	0.79273500
tinvl 4 3 cos run1.txt	tinvl(0.95,x)	A+B*log(i)^4	0.89766353
tinvs 1 3 cos run1.txt	tinvs(0.975,x)	A+B*i	0.87678246
tinvs 2 3 cos run1.txt	tinvs(0.975,x)	A+B/i	0.79395635
tinvs 3 3 cos run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.77794139
tinvs 4 3 cos run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.76501041
trigamma 1 3 cos run1.txt	trigamma (x)	A+B*i	0.79682557
trigamma 2 3 cos run1.txt	trigamma (x)	A+B/i	0.74557412
trigamma 3 3 cos run1.txt	trigamma (x)	A+B*sqrt(i)	0.66180474
trigamma 4 3 cos run1.txt	trigamma (x)	A+B*log(i)^4	0.78427474

Cosine Series of Order 4

The next table shows a summary of results for the Sine series of the order 4:

$$Y = a_0 + a_1 * \cos(C_1 * gx(1,A_1,B_1) + Oc_1) + \dots$$

$$+ a_4 * \cos(C_4 * gx(4,A_4,B_4) + Oc_4) + a_5 * x + a_6 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 4 Cosine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_4_cos_run1.txt	acosh(x)	A+B*i	0.99233265
acosh_2_4_cos_run1.txt	acosh(x)	A+B/i	0.99025884
acosh_3_4_cos_run1.txt	acosh(x)	A+B*sqrt(i)	0.98613889
acosh_4_4_cos_run1.txt	acosh(x)	A+B*log(i)^4	0.99569344
arccos_1_4_cos_run1.txt	arccos(x)	A+B*i	0.99965013
arccos_2_4_cos_run1.txt	arccos(x)	A+B/i	0.99967483
arccos_3_4_cos_run1.txt	arccos(x)	A+B*sqrt(i)	0.99963987
arccos_4_4_cos_run1.txt	arccos(x)	A+B*log(i)^4	0.99966149
arcsin_1_4_cos_run1.txt	arcsin(x)	A+B*i	0.99966287
arcsin_2_4_cos_run1.txt	arcsin(x)	A+B/i	0.99964610
arcsin_3_4_cos_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99965301
arcsin_4_4_cos_run1.txt	arcsin(x)	A+B*log(i)^4	0.99966019
arctan_1_4_cos_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_4_cos_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_4_cos_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_4_cos_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_4_cos_run1.txt	asinh(x)	A+B*i	0.99166136
asinh_2_4_cos_run1.txt	asinh(x)	A+B/i	0.98876100
asinh_3_4_cos_run1.txt	asinh(x)	A+B*sqrt(i)	0.99456115
asinh_4_4_cos_run1.txt	asinh(x)	A+B*log(i)^4	0.99426548
atanh_1_4_cos_run1.txt	atanh(x)	A+B*i	0.99458242
atanh_2_4_cos_run1.txt	atanh(x)	A+B/i	0.99406206
atanh_3_4_cos_run1.txt	atanh(x)	A+B*sqrt(i)	0.99479941
atanh_4_4_cos_run1.txt	atanh(x)	A+B*log(i)^4	0.99436740
CI_1_4_cos_run1.txt	Ci(x)	A+B*i	0.90477482
Ci_2_4_cos_run1.txt	Ci(x)	A+B/i	0.96845887
Ci_3_4_cos_run1.txt	Ci(x)	A+B*sqrt(i)	0.96547667
CI_4_4_cos_run1.txt	Ci(x)	A+B*log(i)^4	0.96639819
cosh_1_4_cos_run1.txt	cosh(x)	A+B*i	0.99999886
cosh_2_4_cos_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_4_cos_run1.txt	cosh(x)	A+B*sqrt(i)	0.99999993
cosh_4_4_cos_run1.txt	cosh(x)	A+B*log(i)^4	0.99999992
digamma_2_4_cos_run1.txt	digamma(x)	A+B/i	0.99541257
digamma_1_4_cos_run1.txt	digamma(x)	A+B*i	0.99821553
digamma_3_4_cos_run1.txt	digamma(x)	A+B*sqrt(i)	0.99746599
digamma_4_4_cos_run1.txt	digamma(x)	A+B*log(i)^4	0.99780654
erf_1_4_cos_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_4_cos_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_4_cos_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_4_cos_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_4_cos_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_4_cos_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_4_cos_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_4_cos_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_4_cos_run1.txt	FresnelCosine(x)	A+B*i	0.91995696
FresnelCosine_2_4_cos_run1.txt	FresnelCosine(x)	A+B/i	0.96892120
FresnelCosine_3_4_cos_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.99128936
FresnelCosine_4_4_cos_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.93558792
FresnelSine_1_4_cos_run1.txt	FresnelSine(x)	A+B*i	0.98678424

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine 2 4 cos run1.txt	FresnelSine(x)	A+B/i	0.91468299
FresnelSine 3 4 cos run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.96455772
FresnelSine 4 4 cos run1.txt	FresnelSine(x)	A+B*log(i)^4	0.93223782
J0x 1 4 cos run1.txt	J0(x)	A+B*i	0.99622964
J0x 2 4 cos run1.txt	J0(x)	A+B/i	0.99705894
J0x 3 4 cos run1.txt	J0(x)	A+B*sqrt(i)	0.98494518
J0x 4 4 cos run1.txt	J0(x)	A+B*log(i)^4	0.99282249
J1x 1 4 cos run1.txt	J1(x)	A+B*i	0.99474751
J1x 2 4 cos run1.txt	J1(x)	A+B/i	0.99538482
J1x 3 4 cos run1.txt	J1(x)	A+B*sqrt(i)	0.96975703
J1x 4 4 cos run1.txt	J1(x)	A+B*log(i)^4	0.99593396
J2x 1 4 cos run1.txt	J2(x)	A+B*i	0.97760772
J2x 2 4 cos run1.txt	J2(x)	A+B/i	0.93537936
J2x 3 4 cos run1.txt	J2(x)	A+B*sqrt(i)	0.99340503
J2x 4 4 cos run1.txt	J2(x)	A+B*log(i)^4	0.99421037
J3x 1 4 cos run1.txt	J3(x)	A+B*i	0.97517108
J3x 2 4 cos run1.txt	J3(x)	A+B/i	0.97561546
J3x 3 4 cos run1.txt	J3(x)	A+B*sqrt(i)	0.93701790
J3x 4 4 cos run1.txt	J3(x)	A+B*log(i)^4	0.99416397
J4x 1 4 cos run1.txt	J4(x)	A+B*i	0.91859884
J4x 2 4 cos run1.txt	J4(x)	A+B/i	0.99699090
J4x 3 4 cos run1.txt	J4(x)	A+B*sqrt(i)	0.96657552
J4x 4 4 cos run1.txt	J4(x)	A+B*log(i)^4	0.99804085
J5x 1 4 cos run1.txt	J5(x)	A+B*i	0.84743238
J5x 2 4 cos run1.txt	J5(x)	A+B/i	0.96643669
J5x 3 4 cos run1.txt	J5(x)	A+B*sqrt(i)	0.96639827
J5x 4 4 cos run1.txt	J5(x)	A+B*log(i)^4	0.97022391
ln 1 4 cos run1.txt	ln(x)	A+B*i	0.99998249
ln 2 4 cos run1.txt	ln(x)	A+B/i	0.99999929
ln 3 4 cos run1.txt	ln(x)	A+B*sqrt(i)	0.99999805
ln 4 4 cos run1.txt	ln(x)	A+B*log(i)^4	0.99998652
log10Gamma 1 4 cos run1.txt	log10Gamma(x)	A+B*i	0.99999890
log10Gamma 2 4 cos run1.txt	log10Gamma(x)	A+B/i	0.99999516
log10Gamma 3 4 cos run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999048
log10Gamma 4 4 cos run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999961
log 1 4 cos run1.txt	log(x)	A+B*i	0.99999446
log 2 4 cos run1.txt	log(x)	A+B/i	0.99999930
log 3 4 cos run1.txt	log(x)	A+B*sqrt(i)	0.99999561
log 4 4 cos run1.txt	log(x)	A+B*log(i)^4	0.99999055
pwr10 1 4 cos run1.txt	10^x	A+B*i	1.00000000
pwr10 2 4 cos run1.txt	10^x	A+B/i	1.00000000
pwr10 3 4 cos run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10 4 4 cos run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh 1 4 cos run1.txt	sinh(x)	A+B*i	0.99999977
sinh 2 4 cos run1.txt	sinh(x)	A+B/i	1.00000000
sinh 3 4 cos run1.txt	sinh(x)	A+B*sqrt(i)	0.99999999
sinh 4 4 cos run1.txt	sinh(x)	A+B*log(i)^4	0.99999991
Si 1 4 cos run1.txt	Si(x)	A+B*i	0.87343358
Si 2 4 cos run1.txt	Si(x)	A+B/i	0.99990580

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si_3_4_cos_run1.txt	Si(x)	A+B*sqrt(i)	0.97423139
Si_4_4_cos_run1.txt	Si(x)	A+B*log(i)^4	0.99681843
tanh_1_4_cos_run1.txt	tanh(x)	A+B*i	1.00000000
tanh_2_4_cos_run1.txt	tanh(x)	A+B/i	0.99999999
tanh_3_4_cos_run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh_4_4_cos_run1.txt	tanh(x)	A+B*log(i)^4	1.00000000
tan_1_4_cos_run1.txt	tan(x)	A+B*i	1.00000000
tan_2_4_cos_run1.txt	tan(x)	A+B/i	1.00000000
tan_3_4_cos_run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan_4_4_cos_run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl_1_4_cos_run1.txt	tinvs(0.95,x)	A+B*i	0.89367723
tinvl_2_4_cos_run1.txt	tinvs(0.95,x)	A+B/i	0.85219777
tinvl_3_4_cos_run1.txt	tinvs(0.95,x)	A+B*sqrt(i)	0.87883580
tinvl_4_4_cos_run1.txt	tinvs(0.95,x)	A+B*log(i)^4	0.95124899
tinvs2_1_4_cos_run1.txt	tinvs(0.975,x)	A+B*i	0.90920303
tinvs2_2_4_cos_run1.txt	tinvs(0.975,x)	A+B/i	0.81240871
tinvs2_3_4_cos_run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.82167159
tinvs2_4_4_cos_run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.93529439
trigamma_1_4_cos_run1.txt	trigamma(x)	A+B*i	0.78106986
trigamma_2_4_cos_run1.txt	trigamma(x)	A+B/i	0.83456054
trigamma_3_4_cos_run1.txt	trigamma(x)	A+B*sqrt(i)	0.79729835
trigamma_4_4_cos_run1.txt	trigamma(x)	A+B*log(i)^4	0.84103804

Cosine Series of Order 5

The next table shows a summary of results for the Sine series of the order 5:

$$Y = a_0 + a_1 * \cos(C_1 * gx(1,A_1,B_1) + Oc_1) + \dots$$

$$+ a_5 * \cos(C_5 * gx(5,A_5,B_5) + Oc_5) + a_6 * x + a_7 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 5 Cosine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_5_cos_run1.txt	acosh(x)	A+B*i	0.99661737
acosh_2_5_cos_run1.txt	acosh(x)	A+B/i	0.99536326
acosh_3_5_cos_run1.txt	acosh(x)	A+B*sqrt(i)	0.99437828
acosh_4_5_cos_run1.txt	acosh(x)	A+B*log(i)^4	0.99255494
arccos_1_5_cos_run1.txt	arccos(x)	A+B*i	0.99975410
arccos_2_5_cos_run1.txt	arccos(x)	A+B/i	0.99972479
arccos_3_5_cos_run1.txt	arccos(x)	A+B*sqrt(i)	0.99973803
arccos_4_5_cos_run1.txt	arccos(x)	A+B*log(i)^4	0.99976087
arcsin_1_5_cos_run1.txt	arcsin(x)	A+B*i	0.99970758
arcsin_2_5_cos_run1.txt	arcsin(x)	A+B/i	0.99975690
arcsin_3_5_cos_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99973246
arcsin_4_5_cos_run1.txt	arcsin(x)	A+B*log(i)^4	0.99976852
arctan_1_5_cos_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_5_cos_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_5_cos_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_5_cos_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_5_cos_run1.txt	asinh(x)	A+B*i	0.99571492
asinh_2_5_cos_run1.txt	asinh(x)	A+B/i	0.99235225
asinh_3_5_cos_run1.txt	asinh(x)	A+B*sqrt(i)	0.99520019
asinh_4_5_cos_run1.txt	asinh(x)	A+B*log(i)^4	0.99699706
atanh_1_5_cos_run1.txt	atanh(x)	A+B*i	0.99605769
atanh_2_5_cos_run1.txt	atanh(x)	A+B/i	0.99586931
atanh_3_5_cos_run1.txt	atanh(x)	A+B*sqrt(i)	0.99599842
atanh_4_5_cos_run1.txt	atanh(x)	A+B*log(i)^4	0.99558967
CI_1_5_cos_run1.txt	Ci(x)	A+B*i	0.94185408
Ci_2_5_cos_run1.txt	Ci(x)	A+B/i	0.97358405
Ci_3_5_cos_run1.txt	Ci(x)	A+B*sqrt(i)	0.92823466
CI_4_5_cos_run1.txt	Ci(x)	A+B*log(i)^4	0.97451777
cosh_1_5_cos_run1.txt	cosh(x)	A+B*i	0.99999995
cosh_2_5_cos_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_5_cos_run1.txt	cosh(x)	A+B*sqrt(i)	1.00000000
cosh_4_5_cos_run1.txt	cosh(x)	A+B*log(i)^4	0.99999999
digamma_2_5_cos_run1.txt	digamma(x)	A+B/i	0.99684089
digamma_1_5_cos_run1.txt	digamma(x)	A+B*i	0.99822371
digamma_3_5_cos_run1.txt	digamma(x)	A+B*sqrt(i)	0.99818601
digamma_4_5_cos_run1.txt	digamma(x)	A+B*log(i)^4	0.99938559
erf_1_5_cos_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_5_cos_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_5_cos_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_5_cos_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_5_cos_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_5_cos_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_5_cos_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_5_cos_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_5_cos_run1.txt	FresnelCosine(x)	A+B*i	0.99454135
FresnelCosine_2_5_cos_run1.txt	FresnelCosine(x)	A+B/i	0.99404704
FresnelCosine_3_5_cos_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.95649345
FresnelCosine_4_5_cos_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.92704330
FresnelSine_1_5_cos_run1.txt	FresnelSine(x)	A+B*i	0.99815027

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine 2 5 cos run1.txt	FresnelSine(x)	A+B/i	0.96452106
FresnelSine 3 5 cos run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.98203111
FresnelSine 4 5 cos run1.txt	FresnelSine(x)	A+B*log(i)^4	0.98667064
J0x 1 5 cos run1.txt	J0(x)	A+B*i	0.98677624
J0x 2 5 cos run1.txt	J0(x)	A+B/i	0.99633415
J0x 3 5 cos run1.txt	J0(x)	A+B*sqrt(i)	0.99171350
J0x 4 5 cos run1.txt	J0(x)	A+B*log(i)^4	0.98580372
J1x 1 5 cos run1.txt	J1(x)	A+B*i	0.96964716
J1x 2 5 cos run1.txt	J1(x)	A+B/i	0.97993419
J1x 3 5 cos run1.txt	J1(x)	A+B*sqrt(i)	0.95855305
J1x 4 5 cos run1.txt	J1(x)	A+B*log(i)^4	0.99969862
J2x 1 5 cos run1.txt	J2(x)	A+B*i	0.99994698
J2x 2 5 cos run1.txt	J2(x)	A+B/i	0.98946365
J2x 3 5 cos run1.txt	J2(x)	A+B*sqrt(i)	0.99966476
J2x 4 5 cos run1.txt	J2(x)	A+B*log(i)^4	0.99997896
J3x 1 5 cos run1.txt	J3(x)	A+B*i	0.96235772
J3x 2 5 cos run1.txt	J3(x)	A+B/i	0.99966029
J3x 3 5 cos run1.txt	J3(x)	A+B*sqrt(i)	0.99381664
J3x 4 5 cos run1.txt	J3(x)	A+B*log(i)^4	0.97432962
J4x 1 5 cos run1.txt	J4(x)	A+B*i	0.95991231
J4x 2 5 cos run1.txt	J4(x)	A+B/i	0.91858703
J4x 3 5 cos run1.txt	J4(x)	A+B*sqrt(i)	0.94347071
J4x 4 5 cos run1.txt	J4(x)	A+B*log(i)^4	0.95807151
J5x 1 5 cos run1.txt	J5(x)	A+B*i	0.93743185
J5x 2 5 cos run1.txt	J5(x)	A+B/i	0.99191306
J5x 3 5 cos run1.txt	J5(x)	A+B*sqrt(i)	0.91284520
J5x 4 5 cos run1.txt	J5(x)	A+B*log(i)^4	0.99969015
ln 1 5 cos run1.txt	ln(x)	A+B*i	0.99998435
ln 2 5 cos run1.txt	ln(x)	A+B/i	0.99999984
ln 3 5 cos run1.txt	ln(x)	A+B*sqrt(i)	0.99999865
ln 4 5 cos run1.txt	ln(x)	A+B*log(i)^4	0.99999569
log10Gamma 1 5 cos run1.txt	log10Gamma(x)	A+B*i	0.99999981
log10Gamma 2 5 cos run1.txt	log10Gamma(x)	A+B/i	0.99999846
log10Gamma 3 5 cos run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999904
log10Gamma 4 5 cos run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999899
log 1 5 cos run1.txt	log(x)	A+B*i	0.99999355
log 2 5 cos run1.txt	log(x)	A+B/i	0.99999973
log 3 5 cos run1.txt	log(x)	A+B*sqrt(i)	0.99999608
log 4 5 cos run1.txt	log(x)	A+B*log(i)^4	0.99999626
pwr10 1 5 cos run1.txt	10^x	A+B*i	1.00000000
pwr10 2 5 cos run1.txt	10^x	A+B/i	1.00000000
pwr10 3 5 cos run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10 4 5 cos run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh 1 5 cos run1.txt	sinh(x)	A+B*i	0.99999983
sinh 2 5 cos run1.txt	sinh(x)	A+B/i	1.00000000
sinh 3 5 cos run1.txt	sinh(x)	A+B*sqrt(i)	0.99999999
sinh 4 5 cos run1.txt	sinh(x)	A+B*log(i)^4	0.99999997
Si 1 5 cos run1.txt	Si(x)	A+B*i	0.96666033
Si 2 5 cos run1.txt	Si(x)	A+B/i	0.98326326

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si_3_5_cos_run1.txt	Si(x)	A+B*sqrt(i)	0.97018123
Si_4_5_cos_run1.txt	Si(x)	A+B*log(i)^4	0.98413152
tanh_1_5_cos_run1.txt	tanh(x)	A+B*i	1.00000000
tanh_2_5_cos_run1.txt	tanh(x)	A+B/i	1.00000000
tanh_3_5_cos_run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh_4_5_cos_run1.txt	tanh(x)	A+B*log(i)^4	0.99999999
tan_1_5_cos_run1.txt	tan(x)	A+B*i	1.00000000
tan_2_5_cos_run1.txt	tan(x)	A+B/i	1.00000000
tan_3_5_cos_run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan_4_5_cos_run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl_1_5_cos_run1.txt	tinvl(0.95,x)	A+B*i	0.94546919
tinvl_2_5_cos_run1.txt	tinvl(0.95,x)	A+B/i	0.83221906
tinvl_3_5_cos_run1.txt	tinvl(0.95,x)	A+B*sqrt(i)	0.91321037
tinvl_4_5_cos_run1.txt	tinvl(0.95,x)	A+B*log(i)^4	0.90916065
tinvs2_1_5_cos_run1.txt	tinvs2(0.975,x)	A+B*i	0.87408302
tinvs2_2_5_cos_run1.txt	tinvs2(0.975,x)	A+B/i	0.79374871
tinvs2_3_5_cos_run1.txt	tinvs2(0.975,x)	A+B*sqrt(i)	0.88739203
tinvs2_4_5_cos_run1.txt	tinvs2(0.975,x)	A+B*log(i)^4	0.91994076
trigamma_1_5_cos_run1.txt	trigamma(x)	A+B*i	0.87638335
trigamma_2_5_cos_run1.txt	trigamma(x)	A+B/i	0.75073173
trigamma_3_5_cos_run1.txt	trigamma(x)	A+B*sqrt(i)	0.76609314
trigamma_4_5_cos_run1.txt	trigamma(x)	A+B*log(i)^4	0.86411204

Cosine Series of Order 6

The next table shows a summary of results for the Sine series of the order 6:

$$Y = a_0 + a_1 * \cos(C_1 * gx(1,A_1,B_1) + Oc_1) + \dots$$

$$+ a_6 * \cos(C_6 * gx(6,A_6,B_6) + Oc_6) + a_7 * x + a_8 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 6 Cosine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_6_cos_run1.txt	acosh(x)	A+B*i	0.99740468
acosh_2_6_cos_run1.txt	acosh(x)	A+B/i	0.99001167
acosh_3_6_cos_run1.txt	acosh(x)	A+B*sqrt(i)	0.99465879
acosh_4_6_cos_run1.txt	acosh(x)	A+B*log(i)^4	0.99282171
arccos_1_6_cos_run1.txt	arccos(x)	A+B*i	0.99976934
arccos_2_6_cos_run1.txt	arccos(x)	A+B/i	0.99980229
arccos_3_6_cos_run1.txt	arccos(x)	A+B*sqrt(i)	0.99983438
arccos_4_6_cos_run1.txt	arccos(x)	A+B*log(i)^4	0.99982632
arcsin_1_6_cos_run1.txt	arcsin(x)	A+B*i	0.99980213
arcsin_2_6_cos_run1.txt	arcsin(x)	A+B/i	0.99982311
arcsin_3_6_cos_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99981239
arcsin_4_6_cos_run1.txt	arcsin(x)	A+B*log(i)^4	0.99979435
arctan_1_6_cos_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_6_cos_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_6_cos_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_6_cos_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_6_cos_run1.txt	asinh(x)	A+B*i	0.99571051
asinh_2_6_cos_run1.txt	asinh(x)	A+B/i	0.99156341
asinh_3_6_cos_run1.txt	asinh(x)	A+B*sqrt(i)	0.99491858
asinh_4_6_cos_run1.txt	asinh(x)	A+B*log(i)^4	0.99640231
atanh_1_6_cos_run1.txt	atanh(x)	A+B*i	0.99670329
atanh_2_6_cos_run1.txt	atanh(x)	A+B/i	0.99670969
atanh_3_6_cos_run1.txt	atanh(x)	A+B*sqrt(i)	0.99690678
atanh_4_6_cos_run1.txt	atanh(x)	A+B*log(i)^4	0.99690361
CI_1_6_cos_run1.txt	Ci(x)	A+B*i	0.97710309
Ci_2_6_cos_run1.txt	Ci(x)	A+B/i	0.99765743
Ci_3_6_cos_run1.txt	Ci(x)	A+B*sqrt(i)	0.95583596
CI_4_6_cos_run1.txt	Ci(x)	A+B*log(i)^4	0.99926601
cosh_1_6_cos_run1.txt	cosh(x)	A+B*i	0.99999988
cosh_2_6_cos_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_6_cos_run1.txt	cosh(x)	A+B*sqrt(i)	0.99999999
cosh_4_6_cos_run1.txt	cosh(x)	A+B*log(i)^4	1.00000000
digamma_2_6_cos_run1.txt	digamma(x)	A+B/i	0.99964467
digamma_1_6_cos_run1.txt	digamma(x)	A+B*i	0.99862361
digamma_3_6_cos_run1.txt	digamma(x)	A+B*sqrt(i)	0.99708194
digamma_4_6_cos_run1.txt	digamma(x)	A+B*log(i)^4	0.99885659
erf_1_6_cos_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_6_cos_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_6_cos_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_6_cos_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_6_cos_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_6_cos_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_6_cos_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_6_cos_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_6_cos_run1.txt	FresnelCosine(x)	A+B*i	0.96647757
FresnelCosine_2_6_cos_run1.txt	FresnelCosine(x)	A+B/i	0.99595483
FresnelCosine_3_6_cos_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.99383219
FresnelCosine_4_6_cos_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.97069316
FresnelSine_1_6_cos_run1.txt	FresnelSine(x)	A+B*i	0.99864080

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine 2 6 cos run1.txt	FresnelSine(x)	A+B/i	0.97934546
FresnelSine 3 6 cos run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.99776472
FresnelSine 4 6 cos run1.txt	FresnelSine(x)	A+B*log(i)^4	0.98891629
J0x 1 6 cos run1.txt	J0(x)	A+B*i	0.99803399
J0x 2 6 cos run1.txt	J0(x)	A+B/i	0.99687461
J0x 3 6 cos run1.txt	J0(x)	A+B*sqrt(i)	0.99425503
J0x 4 6 cos run1.txt	J0(x)	A+B*log(i)^4	0.98334464
J1x 1 6 cos run1.txt	J1(x)	A+B*i	0.98312669
J1x 2 6 cos run1.txt	J1(x)	A+B/i	0.99979444
J1x 3 6 cos run1.txt	J1(x)	A+B*sqrt(i)	0.99898908
J1x 4 6 cos run1.txt	J1(x)	A+B*log(i)^4	0.97524841
J2x 1 6 cos run1.txt	J2(x)	A+B*i	0.97070517
J2x 2 6 cos run1.txt	J2(x)	A+B/i	0.98162048
J2x 3 6 cos run1.txt	J2(x)	A+B*sqrt(i)	0.99993960
J2x 4 6 cos run1.txt	J2(x)	A+B*log(i)^4	0.96453017
J3x 1 6 cos run1.txt	J3(x)	A+B*i	0.98469941
J3x 2 6 cos run1.txt	J3(x)	A+B/i	0.99991166
J3x 3 6 cos run1.txt	J3(x)	A+B*sqrt(i)	0.88288955
J3x 4 6 cos run1.txt	J3(x)	A+B*log(i)^4	0.97106689
J4x 1 6 cos run1.txt	J4(x)	A+B*i	0.99956151
J4x 2 6 cos run1.txt	J4(x)	A+B/i	0.91837927
J4x 3 6 cos run1.txt	J4(x)	A+B*sqrt(i)	0.96781289
J4x 4 6 cos run1.txt	J4(x)	A+B*log(i)^4	0.99730552
J5x 1 6 cos run1.txt	J5(x)	A+B*i	0.95025383
J5x 2 6 cos run1.txt	J5(x)	A+B/i	0.98607006
J5x 3 6 cos run1.txt	J5(x)	A+B*sqrt(i)	0.98878692
J5x 4 6 cos run1.txt	J5(x)	A+B*log(i)^4	0.98547393
ln 1 6 cos run1.txt	ln(x)	A+B*i	0.99998388
ln 2 6 cos run1.txt	ln(x)	A+B/i	0.99999997
ln 3 6 cos run1.txt	ln(x)	A+B*sqrt(i)	0.99999646
ln 4 6 cos run1.txt	ln(x)	A+B*log(i)^4	0.99999606
log10Gamma 1 6 cos run1.txt	log10Gamma(x)	A+B*i	0.99999953
log10Gamma 2 6 cos run1.txt	log10Gamma(x)	A+B/i	0.99999980
log10Gamma 3 6 cos run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999947
log10Gamma 4 6 cos run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999661
log 1 6 cos run1.txt	log(x)	A+B*i	0.99998390
log 2 6 cos run1.txt	log(x)	A+B/i	0.99999996
log 3 6 cos run1.txt	log(x)	A+B*sqrt(i)	0.99999859
log 4 6 cos run1.txt	log(x)	A+B*log(i)^4	0.99999518
pwr10 1 6 cos run1.txt	10^x	A+B*i	1.00000000
pwr10 2 6 cos run1.txt	10^x	A+B/i	1.00000000
pwr10 3 6 cos run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10 4 6 cos run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh 1 6 cos run1.txt	sinh(x)	A+B*i	0.99999827
sinh 2 6 cos run1.txt	sinh(x)	A+B/i	1.00000000
sinh 3 6 cos run1.txt	sinh(x)	A+B*sqrt(i)	1.00000000
sinh 4 6 cos run1.txt	sinh(x)	A+B*log(i)^4	0.99999997
Si 1 6 cos run1.txt	Si(x)	A+B*i	0.80375491
Si 2 6 cos run1.txt	Si(x)	A+B/i	0.99999126

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si_3_6_cos_run1.txt	Si(x)	A+B*sqrt(i)	0.97159394
Si_4_6_cos_run1.txt	Si(x)	A+B*log(i)^4	0.96930089
tanh_1_6_cos_run1.txt	tanh(x)	A+B*i	0.99999994
tanh_2_6_cos_run1.txt	tanh(x)	A+B/i	1.00000000
tanh_3_6_cos_run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh_4_6_cos_run1.txt	tanh(x)	A+B*log(i)^4	0.99999996
tan_1_6_cos_run1.txt	tan(x)	A+B*i	1.00000000
tan_2_6_cos_run1.txt	tan(x)	A+B/i	1.00000000
tan_3_6_cos_run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan_4_6_cos_run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl_1_6_cos_run1.txt	tinvs(0.95,x)	A+B*i	0.89649517
tinvl_2_6_cos_run1.txt	tinvs(0.95,x)	A+B/i	0.96575042
tinvl_3_6_cos_run1.txt	tinvs(0.95,x)	A+B*sqrt(i)	0.91518283
tinvl_4_6_cos_run1.txt	tinvs(0.95,x)	A+B*log(i)^4	0.94348365
tinvs2_1_6_cos_run1.txt	tinvs(0.975,x)	A+B*i	0.90014440
tinvs2_2_6_cos_run1.txt	tinvs(0.975,x)	A+B/i	0.86351259
tinvs2_3_6_cos_run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.89788913
tinvs2_4_6_cos_run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.92151730
trigamma_1_6_cos_run1.txt	trigamma(x)	A+B*i	0.80285483
trigamma_2_6_cos_run1.txt	trigamma(x)	A+B/i	0.81136285
trigamma_3_6_cos_run1.txt	trigamma(x)	A+B*sqrt(i)	0.79860312
trigamma_4_6_cos_run1.txt	trigamma(x)	A+B*log(i)^4	0.85909058

Cosine Series of Order 7

The next table shows a summary of results for the Sine series of the order 7:

$$Y = a_0 + a_1 * \cos(C_1 * gx(1,A_1,B_1) + Oc_1) + \dots$$

$$+ a_7 * \cos(C_7 * gx(7,A_7,B_7) + Oc_7) + a_8 * x + a_9 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 7 Cosine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_7_cos_run1.txt	acosh(x)	A+B*i	0.99427934
acosh_2_7_cos_run1.txt	acosh(x)	A+B/i	0.99396793
acosh_3_7_cos_run1.txt	acosh(x)	A+B*sqrt(i)	0.99394854
acosh_4_7_cos_run1.txt	acosh(x)	A+B*log(i)^4	0.99645395
arccos_1_7_cos_run1.txt	arccos(x)	A+B*i	0.99986203
arccos_2_7_cos_run1.txt	arccos(x)	A+B/i	0.99985094
arccos_3_7_cos_run1.txt	arccos(x)	A+B*sqrt(i)	0.99986841
arccos_4_7_cos_run1.txt	arccos(x)	A+B*log(i)^4	0.99985764
arcsin_1_7_cos_run1.txt	arcsin(x)	A+B*i	0.99989125
arcsin_2_7_cos_run1.txt	arcsin(x)	A+B/i	0.99987435
arcsin_3_7_cos_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99987535
arcsin_4_7_cos_run1.txt	arcsin(x)	A+B*log(i)^4	0.99985478
arctan_1_7_cos_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_7_cos_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_7_cos_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_7_cos_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_7_cos_run1.txt	asinh(x)	A+B*i	0.99342127
asinh_2_7_cos_run1.txt	asinh(x)	A+B/i	0.99277500
asinh_3_7_cos_run1.txt	asinh(x)	A+B*sqrt(i)	0.99377816
asinh_4_7_cos_run1.txt	asinh(x)	A+B*log(i)^4	0.99726274
atanh_1_7_cos_run1.txt	atanh(x)	A+B*i	0.99761377
atanh_2_7_cos_run1.txt	atanh(x)	A+B/i	0.99760254
atanh_3_7_cos_run1.txt	atanh(x)	A+B*sqrt(i)	0.99758298
atanh_4_7_cos_run1.txt	atanh(x)	A+B*log(i)^4	0.99720022
CI_1_7_cos_run1.txt	Ci(x)	A+B*i	0.92101773
Ci_2_7_cos_run1.txt	Ci(x)	A+B/i	0.99936083
Ci_3_7_cos_run1.txt	Ci(x)	A+B*sqrt(i)	0.97547660
CI_4_7_cos_run1.txt	Ci(x)	A+B*log(i)^4	0.93566797
cosh_1_7_cos_run1.txt	cosh(x)	A+B*i	0.99999999
cosh_2_7_cos_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_7_cos_run1.txt	cosh(x)	A+B*sqrt(i)	1.00000000
cosh_4_7_cos_run1.txt	cosh(x)	A+B*log(i)^4	1.00000000
digamma_2_7_cos_run1.txt	digamma(x)	A+B/i	0.99808659
digamma_1_7_cos_run1.txt	digamma(x)	A+B*i	0.99964900
digamma_3_7_cos_run1.txt	digamma(x)	A+B*sqrt(i)	0.99876336
digamma_4_7_cos_run1.txt	digamma(x)	A+B*log(i)^4	0.99747829
erf_1_7_cos_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_7_cos_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_7_cos_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_7_cos_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_7_cos_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_7_cos_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_7_cos_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_7_cos_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_7_cos_run1.txt	FresnelCosine(x)	A+B*i	0.99099222
FresnelCosine_2_7_cos_run1.txt	FresnelCosine(x)	A+B/i	0.98931117
FresnelCosine_3_7_cos_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.99362759
FresnelCosine_4_7_cos_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.99038799
FresnelSine_1_7_cos_run1.txt	FresnelSine(x)	A+B*i	0.99911488

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine 2 7 cos run1.txt	FresnelSine(x)	A+B/i	0.99026712
FresnelSine 3 7 cos run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.99121341
FresnelSine 4 7 cos run1.txt	FresnelSine(x)	A+B*log(i)^4	0.99612168
J0x 1 7 cos run1.txt	J0(x)	A+B*i	0.98782246
J0x 2 7 cos run1.txt	J0(x)	A+B/i	0.99230298
J0x 3 7 cos run1.txt	J0(x)	A+B*sqrt(i)	0.99896939
J0x 4 7 cos run1.txt	J0(x)	A+B*log(i)^4	0.98731581
J1x 1 7 cos run1.txt	J1(x)	A+B*i	0.95126752
J1x 2 7 cos run1.txt	J1(x)	A+B/i	0.99997288
J1x 3 7 cos run1.txt	J1(x)	A+B*sqrt(i)	0.98490619
J1x 4 7 cos run1.txt	J1(x)	A+B*log(i)^4	0.98386124
J2x 1 7 cos run1.txt	J2(x)	A+B*i	0.97979750
J2x 2 7 cos run1.txt	J2(x)	A+B/i	0.99998198
J2x 3 7 cos run1.txt	J2(x)	A+B*sqrt(i)	0.99763767
J2x 4 7 cos run1.txt	J2(x)	A+B*log(i)^4	0.99173086
J3x 1 7 cos run1.txt	J3(x)	A+B*i	0.99153115
J3x 2 7 cos run1.txt	J3(x)	A+B/i	0.99930803
J3x 3 7 cos run1.txt	J3(x)	A+B*sqrt(i)	0.92815992
J3x 4 7 cos run1.txt	J3(x)	A+B*log(i)^4	0.99998215
J4x 1 7 cos run1.txt	J4(x)	A+B*i	0.96000397
J4x 2 7 cos run1.txt	J4(x)	A+B/i	0.96524250
J4x 3 7 cos run1.txt	J4(x)	A+B*sqrt(i)	0.95665646
J4x 4 7 cos run1.txt	J4(x)	A+B*log(i)^4	0.97528950
J5x 1 7 cos run1.txt	J5(x)	A+B*i	0.91201683
J5x 2 7 cos run1.txt	J5(x)	A+B/i	0.98773295
J5x 3 7 cos run1.txt	J5(x)	A+B*sqrt(i)	0.94677149
J5x 4 7 cos run1.txt	J5(x)	A+B*log(i)^4	0.96338351
ln 1 7 cos run1.txt	ln(x)	A+B*i	0.99998404
ln 2 7 cos run1.txt	ln(x)	A+B/i	0.99999999
ln 3 7 cos run1.txt	ln(x)	A+B*sqrt(i)	0.99999965
ln 4 7 cos run1.txt	ln(x)	A+B*log(i)^4	0.99999630
log10Gamma 1 7 cos run1.txt	log10Gamma(x)	A+B*i	0.99999984
log10Gamma 2 7 cos run1.txt	log10Gamma(x)	A+B/i	0.99999626
log10Gamma 3 7 cos run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999892
log10Gamma 4 7 cos run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999988
log 1 7 cos run1.txt	log(x)	A+B*i	0.99999112
log 2 7 cos run1.txt	log(x)	A+B/i	0.99999998
log 3 7 cos run1.txt	log(x)	A+B*sqrt(i)	0.99999636
log 4 7 cos run1.txt	log(x)	A+B*log(i)^4	0.99999685
pwr10 1 7 cos run1.txt	10^x	A+B*i	1.00000000
pwr10 2 7 cos run1.txt	10^x	A+B/i	1.00000000
pwr10 3 7 cos run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10 4 7 cos run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh 1 7 cos run1.txt	sinh(x)	A+B*i	0.99999989
sinh 2 7 cos run1.txt	sinh(x)	A+B/i	1.00000000
sinh 3 7 cos run1.txt	sinh(x)	A+B*sqrt(i)	1.00000000
sinh 4 7 cos run1.txt	sinh(x)	A+B*log(i)^4	1.00000000
Si 1 7 cos run1.txt	Si(x)	A+B*i	0.93544983
Si 2 7 cos run1.txt	Si(x)	A+B/i	0.99998740

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si 3 7 cos run1.txt	Si (x)	A+B*sqrt(i)	0.99987183
Si 4 7 cos run1.txt	Si (x)	A+B*log(i)^4	0.94233284
tanh 1 7 cos run1.txt	tanh(x)	A+B*i	0.99999996
tanh 2 7 cos run1.txt	tanh(x)	A+B/i	1.00000000
tanh 3 7 cos run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh 4 7 cos run1.txt	tanh(x)	A+B*log(i)^4	1.00000000
tan 1 7 cos run1.txt	tan(x)	A+B*i	1.00000000
tan 2 7 cos run1.txt	tan(x)	A+B/i	1.00000000
tan 3 7 cos run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan 4 7 cos run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl 1 7 cos run1.txt	tinvs(0.95,x)	A+B*i	0.90179697
tinvl 2 7 cos run1.txt	tinvs(0.95,x)	A+B/i	0.89642336
tinvl 3 7 cos run1.txt	tinvs(0.95,x)	A+B*sqrt(i)	0.89754115
tinvl 4 7 cos run1.txt	tinvs(0.95,x)	A+B*log(i)^4	0.94693483
tinvs2 1 7 cos run1.txt	tinvs(0.975,x)	A+B*i	0.85363564
tinvs2 2 7 cos run1.txt	tinvs(0.975,x)	A+B/i	0.95291167
tinvs2 3 7 cos run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.91864851
tinvs2 4 7 cos run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.92296253
trigamma 1 7 cos run1.txt	trigamma(x)	A+B*i	0.80147133
trigamma 2 7 cos run1.txt	trigamma(x)	A+B/i	0.68223997
trigamma 3 7 cos run1.txt	trigamma(x)	A+B*sqrt(i)	0.82020232
trigamma 4 7 cos run1.txt	trigamma(x)	A+B*log(i)^4	0.85537286

Alternating Sine/Cosine Series of Order 3

The next table shows a summary of results for the Sine series of the order 3:

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \cos(S_2 * gx(2,A_2,B_2) + Os_2) \\ + a_3 * \sin(S_3 * gx(3,A_3,B_3) + Os_3) + a_4 * x + a_5 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 3 Sine Cosine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_3_run1.txt	acosh(x)	A+B*i	0.99184493
acosh_2_3_run1.txt	acosh(x)	A+B/i	0.99026434
acosh_3_3_run1.txt	acosh(x)	A+B*sqrt(i)	0.98663644
acosh_4_3_run1.txt	acosh(x)	A+B*log(i)^4	0.99397235
arccos_1_3_run1.txt	arccos(x)	A+B*i	0.99950530
arccos_2_3_run1.txt	arccos(x)	A+B/i	0.99950237
arccos_3_3_run1.txt	arccos(x)	A+B*sqrt(i)	0.99960731
arccos_4_3_run1.txt	arccos(x)	A+B*log(i)^4	0.99951465
arcsin_1_3_run1.txt	arcsin(x)	A+B*i	0.99948995
arcsin_2_3_run1.txt	arcsin(x)	A+B/i	0.99954699
arcsin_3_3_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99950739
arcsin_4_3_run1.txt	arcsin(x)	A+B*log(i)^4	0.99949027
arctan_1_3_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_3_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_3_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_3_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_3_run1.txt	asinh(x)	A+B*i	0.99507180
asinh_2_3_run1.txt	asinh(x)	A+B/i	0.99079967
asinh_3_3_run1.txt	asinh(x)	A+B*sqrt(i)	0.98416741
asinh_4_3_run1.txt	asinh(x)	A+B*log(i)^4	0.99444268
atanh_1_3_run1.txt	atanh(x)	A+B*i	0.99243795
atanh_2_3_run1.txt	atanh(x)	A+B/i	0.99288051
atanh_3_3_run1.txt	atanh(x)	A+B*sqrt(i)	0.99144968
atanh_4_3_run1.txt	atanh(x)	A+B*log(i)^4	0.99262602
CI_1_3_run1.txt	Ci(x)	A+B*i	0.92970810
Ci_2_3_run1.txt	Ci(x)	A+B/i	0.90068129
Ci_3_3_run1.txt	Ci(x)	A+B*sqrt(i)	0.89234557
CI_4_3_run1.txt	Ci(x)	A+B*log(i)^4	0.94774537
cosh_1_3_run1.txt	cosh(x)	A+B*i	0.99999999
cosh_2_3_run1.txt	cosh(x)	A+B/i	0.99999998
cosh_3_3_run1.txt	cosh(x)	A+B*sqrt(i)	0.99999936
cosh_4_3_run1.txt	cosh(x)	A+B*log(i)^4	0.99999994
digamma_2_3_run1.txt	digamma(x)	A+B/i	0.99484506
digamma_1_3_run1.txt	digamma(x)	A+B*i	0.99849799
digamma_3_3_run1.txt	digamma(x)	A+B*sqrt(i)	0.99376273
digamma_4_3_run1.txt	digamma(x)	A+B*log(i)^4	0.99342948
erf_1_3_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_3_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_3_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_3_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_3_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_3_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_3_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_3_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_3_run1.txt	FresnelCosine(x)	A+B*i	0.91778512
FresnelCosine_2_3_run1.txt	FresnelCosine(x)	A+B/i	0.91369046
FresnelCosine_3_3_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.93649437
FresnelCosine_4_3_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.90249656
FresnelSine_1_3_run1.txt	FresnelSine(x)	A+B*i	0.93291149

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine_2_3_run1.txt	FresnelSine(x)	A+B/i	0.91142110
FresnelSine_3_3_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.92699887
FresnelSine_4_3_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.93108254
J0x_1_3_run1.txt	J0(x)	A+B*i	0.98497180
J0x_2_3_run1.txt	J0(x)	A+B/i	0.99511596
J0x_3_3_run1.txt	J0(x)	A+B*sqrt(i)	0.99468188
J0x_4_3_run1.txt	J0(x)	A+B*log(i)^4	0.99647863
J1x_1_3_run1.txt	J1(x)	A+B*i	0.99141837
J1x_2_3_run1.txt	J1(x)	A+B/i	0.97434230
J1x_3_3_run1.txt	J1(x)	A+B*sqrt(i)	0.97616127
J1x_4_3_run1.txt	J1(x)	A+B*log(i)^4	0.99508233
J2x_1_3_run1.txt	J2(x)	A+B*i	0.93905319
J2x_2_3_run1.txt	J2(x)	A+B/i	0.94082395
J2x_3_3_run1.txt	J2(x)	A+B*sqrt(i)	0.85095555
J2x_4_3_run1.txt	J2(x)	A+B*log(i)^4	0.99055464
J3x_1_3_run1.txt	J3(x)	A+B*i	0.94745206
J3x_2_3_run1.txt	J3(x)	A+B/i	0.92155167
J3x_3_3_run1.txt	J3(x)	A+B*sqrt(i)	0.94895839
J3x_4_3_run1.txt	J3(x)	A+B*log(i)^4	0.97590821
J4x_1_3_run1.txt	J4(x)	A+B*i	0.88903485
J4x_2_3_run1.txt	J4(x)	A+B/i	0.93599988
J4x_3_3_run1.txt	J4(x)	A+B*sqrt(i)	0.91738878
J4x_4_3_run1.txt	J4(x)	A+B*log(i)^4	0.98407804
J5x_1_3_run1.txt	J5(x)	A+B*i	0.84492735
J5x_2_3_run1.txt	J5(x)	A+B/i	0.90327130
J5x_3_3_run1.txt	J5(x)	A+B*sqrt(i)	0.93190431
J5x_4_3_run1.txt	J5(x)	A+B*log(i)^4	0.95780826
ln_1_3_run1.txt	ln(x)	A+B*i	0.99999302
ln_2_3_run1.txt	ln(x)	A+B/i	0.99999480
ln_3_3_run1.txt	ln(x)	A+B*sqrt(i)	0.99999638
ln_4_3_run1.txt	ln(x)	A+B*log(i)^4	0.99999251
log10Gamma_1_3_run1.txt	log10Gamma(x)	A+B*i	0.99999903
log10Gamma_2_3_run1.txt	log10Gamma(x)	A+B/i	0.99999398
log10Gamma_3_3_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999105
log10Gamma_4_3_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999891
log_1_3_run1.txt	log(x)	A+B*i	0.99998516
log_2_3_run1.txt	log(x)	A+B/i	0.99999770
log_3_3_run1.txt	log(x)	A+B*sqrt(i)	0.99999640
log_4_3_run1.txt	log(x)	A+B*log(i)^4	0.99999450
pwr10_1_3_run1.txt	10^x	A+B*i	1.00000000
pwr10_2_3_run1.txt	10^x	A+B/i	1.00000000
pwr10_3_3_run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10_4_3_run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh_1_3_run1.txt	sinh(x)	A+B*i	0.99999997
sinh_2_3_run1.txt	sinh(x)	A+B/i	0.99999996
sinh_3_3_run1.txt	sinh(x)	A+B*sqrt(i)	1.00000000
sinh_4_3_run1.txt	sinh(x)	A+B*log(i)^4	0.99999908
Si_1_3_run1.txt	Si(x)	A+B*i	0.89517880
Si_2_3_run1.txt	Si(x)	A+B/i	0.90413989

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si_3_3_run1.txt	Si(x)	A+B*sqrt(i)	0.89885735
Si_4_3_run1.txt	Si(x)	A+B*log(i)^4	0.99360851
tanh_1_3_run1.txt	tanh(x)	A+B*i	0.99999999
tanh_2_3_run1.txt	tanh(x)	A+B/i	0.99999992
tanh_3_3_run1.txt	tanh(x)	A+B*sqrt(i)	0.99999994
tanh_4_3_run1.txt	tanh(x)	A+B*log(i)^4	0.99999996
tan_1_3_run1.txt	tan(x)	A+B*i	0.99999999
tan_2_3_run1.txt	tan(x)	A+B/i	0.99999999
tan_3_3_run1.txt	tan(x)	A+B*sqrt(i)	0.99999997
tan_4_3_run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl_1_3_run1.txt	tinvl(0.95,x)	A+B*i	0.90399520
tinvl_2_3_run1.txt	tinvl(0.95,x)	A+B/i	0.85450467
tinvl_3_3_run1.txt	tinvl(0.95,x)	A+B*sqrt(i)	0.79353781
tinvl_4_3_run1.txt	tinvl(0.95,x)	A+B*log(i)^4	0.89540475
tinvs_1_3_run1.txt	tinvs(0.975,x)	A+B*i	0.89222566
tinvs_2_3_run1.txt	tinvs(0.975,x)	A+B/i	0.81214048
tinvs_3_3_run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.77487901
tinvs_4_3_run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.87695456
trigamma_1_3_run1.txt	trigamma(x)	A+B*i	0.79750301
trigamma_2_3_run1.txt	trigamma(x)	A+B/i	0.68685993
trigamma_3_3_run1.txt	trigamma(x)	A+B*sqrt(i)	0.65973538
trigamma_4_3_run1.txt	trigamma(x)	A+B*log(i)^4	0.77949243

Alternating Sine/Cosine Series of Order 4

The next table shows a summary of results for the Sine series of the order 4:

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \cos(S_2 * gx(2,A_2,B_2) + Os_2) \\ + \dots + a_4 * \sin(S_4 * gx(4,A_4,B_4) + Os_4) + a_5 * x + a_6 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 4 Sine Cosine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_4_run1.txt	acosh(x)	A+B*i	0.99473559
acosh_2_4_run1.txt	acosh(x)	A+B/i	0.99536564
acosh_3_4_run1.txt	acosh(x)	A+B*sqrt(i)	0.98644696
acosh_4_4_run1.txt	acosh(x)	A+B*log(i)^4	0.99668950
arccos_1_4_run1.txt	arccos(x)	A+B*i	0.99966449
arccos_2_4_run1.txt	arccos(x)	A+B/i	0.99964241
arccos_3_4_run1.txt	arccos(x)	A+B*sqrt(i)	0.99965825
arccos_4_4_run1.txt	arccos(x)	A+B*log(i)^4	0.99964152
arcsin_1_4_run1.txt	arcsin(x)	A+B*i	0.99966682
arcsin_2_4_run1.txt	arcsin(x)	A+B/i	0.99966094
arcsin_3_4_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99967119
arcsin_4_4_run1.txt	arcsin(x)	A+B*log(i)^4	0.99967092
arctan_1_4_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_4_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_4_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_4_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_4_run1.txt	asinh(x)	A+B*i	0.99420042
asinh_2_4_run1.txt	asinh(x)	A+B/i	0.98889355
asinh_3_4_run1.txt	asinh(x)	A+B*sqrt(i)	0.98414407
asinh_4_4_run1.txt	asinh(x)	A+B*log(i)^4	0.99606801
atanh_1_4_run1.txt	atanh(x)	A+B*i	0.99441054
atanh_2_4_run1.txt	atanh(x)	A+B/i	0.99471088
atanh_3_4_run1.txt	atanh(x)	A+B*sqrt(i)	0.99474653
atanh_4_4_run1.txt	atanh(x)	A+B*log(i)^4	0.99439445
CI_1_4_run1.txt	Ci(x)	A+B*i	0.90042959
Ci_2_4_run1.txt	Ci(x)	A+B/i	0.94752958
Ci_3_4_run1.txt	Ci(x)	A+B*sqrt(i)	0.92251110
CI_4_4_run1.txt	Ci(x)	A+B*log(i)^4	0.93197003
cosh_1_4_run1.txt	cosh(x)	A+B*i	0.99999957
cosh_2_4_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_4_run1.txt	cosh(x)	A+B*sqrt(i)	0.99999999
cosh_4_4_run1.txt	cosh(x)	A+B*log(i)^4	0.99999989
digamma_2_4_run1.txt	digamma(x)	A+B/i	0.99654425
digamma_1_4_run1.txt	digamma(x)	A+B*i	0.99861232
digamma_3_4_run1.txt	digamma(x)	A+B*sqrt(i)	0.99832956
digamma_4_4_run1.txt	digamma(x)	A+B*log(i)^4	0.99953162
erf_1_4_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_4_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_4_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_4_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_4_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_4_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_4_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_4_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_4_run1.txt	FresnelCosine(x)	A+B*i	0.95433658
FresnelCosine_2_4_run1.txt	FresnelCosine(x)	A+B/i	0.98644925
FresnelCosine_3_4_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.99675378
FresnelCosine_4_4_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.93185335
FresnelSine_1_4_run1.txt	FresnelSine(x)	A+B*i	0.93465692

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine_2_4_run1.txt	FresnelSine(x)	A+B/i	0.91565880
FresnelSine_3_4_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.96252874
FresnelSine_4_4_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.92155101
J0x_1_4_run1.txt	J0(x)	A+B*i	0.99075923
J0x_2_4_run1.txt	J0(x)	A+B/i	0.99083703
J0x_3_4_run1.txt	J0(x)	A+B*sqrt(i)	0.98322802
J0x_4_4_run1.txt	J0(x)	A+B*log(i)^4	0.98975890
J1x_1_4_run1.txt	J1(x)	A+B*i	0.98291478
J1x_2_4_run1.txt	J1(x)	A+B/i	0.96960498
J1x_3_4_run1.txt	J1(x)	A+B*sqrt(i)	0.98190471
J1x_4_4_run1.txt	J1(x)	A+B*log(i)^4	0.97183051
J2x_1_4_run1.txt	J2(x)	A+B*i	0.99359756
J2x_2_4_run1.txt	J2(x)	A+B/i	0.94125967
J2x_3_4_run1.txt	J2(x)	A+B*sqrt(i)	0.92951596
J2x_4_4_run1.txt	J2(x)	A+B*log(i)^4	0.99299041
J3x_1_4_run1.txt	J3(x)	A+B*i	0.99340034
J3x_2_4_run1.txt	J3(x)	A+B/i	0.99864632
J3x_3_4_run1.txt	J3(x)	A+B*sqrt(i)	0.93308258
J3x_4_4_run1.txt	J3(x)	A+B*log(i)^4	0.94785530
J4x_1_4_run1.txt	J4(x)	A+B*i	0.99840629
J4x_2_4_run1.txt	J4(x)	A+B/i	0.98650239
J4x_3_4_run1.txt	J4(x)	A+B*sqrt(i)	0.91855867
J4x_4_4_run1.txt	J4(x)	A+B*log(i)^4	0.97022654
J5x_1_4_run1.txt	J5(x)	A+B*i	0.82644323
J5x_2_4_run1.txt	J5(x)	A+B/i	0.96371123
J5x_3_4_run1.txt	J5(x)	A+B*sqrt(i)	0.96142902
J5x_4_4_run1.txt	J5(x)	A+B*log(i)^4	0.95664988
ln_1_4_run1.txt	ln(x)	A+B*i	0.99999298
ln_2_4_run1.txt	ln(x)	A+B/i	0.99999887
ln_3_4_run1.txt	ln(x)	A+B*sqrt(i)	0.99999474
ln_4_4_run1.txt	ln(x)	A+B*log(i)^4	0.99998960
log10Gamma_1_4_run1.txt	log10Gamma(x)	A+B*i	0.99999963
log10Gamma_2_4_run1.txt	log10Gamma(x)	A+B/i	0.99999885
log10Gamma_3_4_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999904
log10Gamma_4_4_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999950
log_1_4_run1.txt	log(x)	A+B*i	0.99998515
log_2_4_run1.txt	log(x)	A+B/i	0.99999908
log_3_4_run1.txt	log(x)	A+B*sqrt(i)	0.99999768
log_4_4_run1.txt	log(x)	A+B*log(i)^4	0.99999461
pwr10_1_4_run1.txt	10^x	A+B*i	1.00000000
pwr10_2_4_run1.txt	10^x	A+B/i	1.00000000
pwr10_3_4_run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10_4_4_run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh_1_4_run1.txt	sinh(x)	A+B*i	0.99999978
sinh_2_4_run1.txt	sinh(x)	A+B/i	1.00000000
sinh_3_4_run1.txt	sinh(x)	A+B*sqrt(i)	1.00000000
sinh_4_4_run1.txt	sinh(x)	A+B*log(i)^4	0.99999994
Si_1_4_run1.txt	Si(x)	A+B*i	0.95791750
Si_2_4_run1.txt	Si(x)	A+B/i	0.99778458

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_4_run1.txt	Si(x)	A+B*sqrt(i)	0.99816070
Si_4_4_run1.txt	Si(x)	A+B*log(i)^4	0.96317603
tanh_1_4_run1.txt	tanh(x)	A+B*i	1.00000000
tanh_2_4_run1.txt	tanh(x)	A+B/i	0.99999998
tanh_3_4_run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh_4_4_run1.txt	tanh(x)	A+B*log(i)^4	0.99999999
tan_1_4_run1.txt	tan(x)	A+B*i	1.00000000
tan_2_4_run1.txt	tan(x)	A+B/i	1.00000000
tan_3_4_run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan_4_4_run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl_1_4_run1.txt	tinvl(0.95,x)	A+B*i	0.90231313
tinvl_2_4_run1.txt	tinvl(0.95,x)	A+B/i	0.81010112
tinvl_3_4_run1.txt	tinvl(0.95,x)	A+B*sqrt(i)	0.89903858
tinvl_4_4_run1.txt	tinvl(0.95,x)	A+B*log(i)^4	0.94256874
tinvs_1_4_run1.txt	tinvs(0.975,x)	A+B*i	0.84045561
tinvs_2_4_run1.txt	tinvs(0.975,x)	A+B/i	0.81898132
tinvs_3_4_run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.87946725
tinvs_4_4_run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.92951849
trigamma_1_4_run1.txt	trigamma(x)	A+B*i	0.85664035
trigamma_2_4_run1.txt	trigamma(x)	A+B/i	0.67248752
trigamma_3_4_run1.txt	trigamma(x)	A+B*sqrt(i)	0.80145545
trigamma_4_4_run1.txt	trigamma(x)	A+B*log(i)^4	0.86993639

Alternating Sine/Cosine Series of Order 5

The next table shows a summary of results for the Sine series of the order 5:

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \cos(S_2 * gx(2,A_2,B_2) + Os_2) \\ + \dots + a_5 * \sin(S_5 * gx(5,A_5,B_5) + Os_5) + a_6 * x + a_7 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 5 Sine Cosine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_5_run1.txt	acosh(x)	A+B*i	0.99312445
acosh_2_5_run1.txt	acosh(x)	A+B/i	0.99174273
acosh_3_5_run1.txt	acosh(x)	A+B*sqrt(i)	0.99200919
acosh_4_5_run1.txt	acosh(x)	A+B*log(i)^4	0.99505670
arccos_1_5_run1.txt	arccos(x)	A+B*i	0.99973841
arccos_2_5_run1.txt	arccos(x)	A+B/i	0.99974688
arccos_3_5_run1.txt	arccos(x)	A+B*sqrt(i)	0.99975569
arccos_4_5_run1.txt	arccos(x)	A+B*log(i)^4	0.99974345
arcsin_1_5_run1.txt	arcsin(x)	A+B*i	0.99975014
arcsin_2_5_run1.txt	arcsin(x)	A+B/i	0.99976693
arcsin_3_5_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99976257
arcsin_4_5_run1.txt	arcsin(x)	A+B*log(i)^4	0.99976764
arctan_1_5_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_5_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_5_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_5_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_5_run1.txt	asinh(x)	A+B*i	0.99466435
asinh_2_5_run1.txt	asinh(x)	A+B/i	0.98772988
asinh_3_5_run1.txt	asinh(x)	A+B*sqrt(i)	0.99131617
asinh_4_5_run1.txt	asinh(x)	A+B*log(i)^4	0.99676297
atanh_1_5_run1.txt	atanh(x)	A+B*i	0.99579894
atanh_2_5_run1.txt	atanh(x)	A+B/i	0.99573103
atanh_3_5_run1.txt	atanh(x)	A+B*sqrt(i)	0.99597049
atanh_4_5_run1.txt	atanh(x)	A+B*log(i)^4	0.99593906
CI_1_5_run1.txt	Ci(x)	A+B*i	0.97055435
Ci_2_5_run1.txt	Ci(x)	A+B/i	0.99759372
Ci_3_5_run1.txt	Ci(x)	A+B*sqrt(i)	0.90186954
CI_4_5_run1.txt	Ci(x)	A+B*log(i)^4	0.97679417
cosh_1_5_run1.txt	cosh(x)	A+B*i	0.99999985
cosh_2_5_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_5_run1.txt	cosh(x)	A+B*sqrt(i)	1.00000000
cosh_4_5_run1.txt	cosh(x)	A+B*log(i)^4	0.99999998
digamma_2_5_run1.txt	digamma(x)	A+B/i	0.99889225
digamma_1_5_run1.txt	digamma(x)	A+B*i	0.99841448
digamma_3_5_run1.txt	digamma(x)	A+B*sqrt(i)	0.99850374
digamma_4_5_run1.txt	digamma(x)	A+B*log(i)^4	0.99958910
erf_1_5_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_5_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_5_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_5_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_5_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_5_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_5_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_5_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_5_run1.txt	FresnelCosine(x)	A+B*i	0.97980517
FresnelCosine_2_5_run1.txt	FresnelCosine(x)	A+B/i	0.99435567
FresnelCosine_3_5_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.94246650
FresnelCosine_4_5_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.93246957
FresnelSine_1_5_run1.txt	FresnelSine(x)	A+B*i	0.93193299

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine_2_5_run1.txt	FresnelSine(x)	A+B/i	0.96969263
FresnelSine_3_5_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.89957146
FresnelSine_4_5_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.93456146
J0x_1_5_run1.txt	J0(x)	A+B*i	0.98751387
J0x_2_5_run1.txt	J0(x)	A+B/i	0.99277304
J0x_3_5_run1.txt	J0(x)	A+B*sqrt(i)	0.98937109
J0x_4_5_run1.txt	J0(x)	A+B*log(i)^4	0.99166167
J1x_1_5_run1.txt	J1(x)	A+B*i	0.97647650
J1x_2_5_run1.txt	J1(x)	A+B/i	0.98777120
J1x_3_5_run1.txt	J1(x)	A+B*sqrt(i)	0.99076764
J1x_4_5_run1.txt	J1(x)	A+B*log(i)^4	0.99972251
J2x_1_5_run1.txt	J2(x)	A+B*i	0.95554331
J2x_2_5_run1.txt	J2(x)	A+B/i	0.98952540
J2x_3_5_run1.txt	J2(x)	A+B*sqrt(i)	0.99678569
J2x_4_5_run1.txt	J2(x)	A+B*log(i)^4	0.99064052
J3x_1_5_run1.txt	J3(x)	A+B*i	0.97775692
J3x_2_5_run1.txt	J3(x)	A+B/i	0.94820871
J3x_3_5_run1.txt	J3(x)	A+B*sqrt(i)	0.99947002
J3x_4_5_run1.txt	J3(x)	A+B*log(i)^4	0.99933032
J4x_1_5_run1.txt	J4(x)	A+B*i	0.97506663
J4x_2_5_run1.txt	J4(x)	A+B/i	0.99996821
J4x_3_5_run1.txt	J4(x)	A+B*sqrt(i)	0.99809060
J4x_4_5_run1.txt	J4(x)	A+B*log(i)^4	0.89169973
J5x_1_5_run1.txt	J5(x)	A+B*i	0.95192477
J5x_2_5_run1.txt	J5(x)	A+B/i	0.95662834
J5x_3_5_run1.txt	J5(x)	A+B*sqrt(i)	0.98689582
J5x_4_5_run1.txt	J5(x)	A+B*log(i)^4	0.98751408
ln_1_5_run1.txt	ln(x)	A+B*i	0.99998532
ln_2_5_run1.txt	ln(x)	A+B/i	0.99999976
ln_3_5_run1.txt	ln(x)	A+B*sqrt(i)	0.99998759
ln_4_5_run1.txt	ln(x)	A+B*log(i)^4	0.99999498
log10Gamma_1_5_run1.txt	log10Gamma(x)	A+B*i	0.99999815
log10Gamma_2_5_run1.txt	log10Gamma(x)	A+B/i	0.99999980
log10Gamma_3_5_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999893
log10Gamma_4_5_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999845
log_1_5_run1.txt	log(x)	A+B*i	0.99998582
log_2_5_run1.txt	log(x)	A+B/i	0.99999975
log_3_5_run1.txt	log(x)	A+B*sqrt(i)	0.99999548
log_4_5_run1.txt	log(x)	A+B*log(i)^4	0.99999436
pwr10_1_5_run1.txt	10^x	A+B*i	1.00000000
pwr10_2_5_run1.txt	10^x	A+B/i	1.00000000
pwr10_3_5_run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10_4_5_run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh_1_5_run1.txt	sinh(x)	A+B*i	0.99999979
sinh_2_5_run1.txt	sinh(x)	A+B/i	1.00000000
sinh_3_5_run1.txt	sinh(x)	A+B*sqrt(i)	1.00000000
sinh_4_5_run1.txt	sinh(x)	A+B*log(i)^4	1.00000000
Si_1_5_run1.txt	Si(x)	A+B*i	0.94676388
Si_2_5_run1.txt	Si(x)	A+B/i	0.99948440

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si_3_5_run1.txt	Si(x)	A+B*sqrt(i)	0.93065866
Si_4_5_run1.txt	Si(x)	A+B*log(i)^4	0.99937811
tanh_1_5_run1.txt	tanh(x)	A+B*i	1.00000000
tanh_2_5_run1.txt	tanh(x)	A+B/i	1.00000000
tanh_3_5_run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh_4_5_run1.txt	tanh(x)	A+B*log(i)^4	0.99999979
tan_1_5_run1.txt	tan(x)	A+B*i	1.00000000
tan_2_5_run1.txt	tan(x)	A+B/i	1.00000000
tan_3_5_run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan_4_5_run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl_1_5_run1.txt	tinvl(0.95,x)	A+B*i	0.91568507
tinvl_2_5_run1.txt	tinvl(0.95,x)	A+B/i	0.95639410
tinvl_3_5_run1.txt	tinvl(0.95,x)	A+B*sqrt(i)	0.90701694
tinvl_4_5_run1.txt	tinvl(0.95,x)	A+B*log(i)^4	0.92897880
tinlv2_1_5_run1.txt	tinlv2(0.975,x)	A+B*i	0.88870150
tinlv2_2_5_run1.txt	tinlv2(0.975,x)	A+B/i	0.78154691
tinlv2_3_5_run1.txt	tinlv2(0.975,x)	A+B*sqrt(i)	0.85024270
tinlv2_4_5_run1.txt	tinlv2(0.975,x)	A+B*log(i)^4	0.91224053
trigamma_1_5_run1.txt	trigamma(x)	A+B*i	0.83656569
trigamma_2_5_run1.txt	trigamma(x)	A+B/i	0.79612923
trigamma_3_5_run1.txt	trigamma(x)	A+B*sqrt(i)	0.77111059
trigamma_4_5_run1.txt	trigamma(x)	A+B*log(i)^4	0.79929259

Alternating Sine/Cosine Series of Order 6

The next table shows a summary of results for the Sine series of the order 6:

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \cos(S_2 * gx(2,A_2,B_2) + Os_2) \\ + \dots + a_6 * \sin(S_6 * gx(6,A_6,B_6) + Os_6) + a_7 * x + a_8 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 6 Sine Cosine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_6_run1.txt	acosh(x)	A+B*i	0.99120240
acosh_2_6_run1.txt	acosh(x)	A+B/i	0.99486462
acosh_3_6_run1.txt	acosh(x)	A+B*sqrt(i)	0.99320161
acosh_4_6_run1.txt	acosh(x)	A+B*log(i)^4	0.99134285
arccos_1_6_run1.txt	arccos(x)	A+B*i	0.99982120
arccos_2_6_run1.txt	arccos(x)	A+B/i	0.99981560
arccos_3_6_run1.txt	arccos(x)	A+B*sqrt(i)	0.99980668
arccos_4_6_run1.txt	arccos(x)	A+B*log(i)^4	0.99981250
arcsin_1_6_run1.txt	arcsin(x)	A+B*i	0.99983073
arcsin_2_6_run1.txt	arcsin(x)	A+B/i	0.99982156
arcsin_3_6_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99982195
arcsin_4_6_run1.txt	arcsin(x)	A+B*log(i)^4	0.99981112
arctan_1_6_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_6_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_6_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_6_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_6_run1.txt	asinh(x)	A+B*i	0.99529753
asinh_2_6_run1.txt	asinh(x)	A+B/i	0.99953126
asinh_3_6_run1.txt	asinh(x)	A+B*sqrt(i)	0.99427725
asinh_4_6_run1.txt	asinh(x)	A+B*log(i)^4	0.99739515
atanh_1_6_run1.txt	atanh(x)	A+B*i	0.99650327
atanh_2_6_run1.txt	atanh(x)	A+B/i	0.99678478
atanh_3_6_run1.txt	atanh(x)	A+B*sqrt(i)	0.99698237
atanh_4_6_run1.txt	atanh(x)	A+B*log(i)^4	0.99671570
CI_1_6_run1.txt	Ci(x)	A+B*i	0.96908573
Ci_2_6_run1.txt	Ci(x)	A+B/i	0.97451481
Ci_3_6_run1.txt	Ci(x)	A+B*sqrt(i)	0.94768242
CI_4_6_run1.txt	Ci(x)	A+B*log(i)^4	0.95736932
cosh_1_6_run1.txt	cosh(x)	A+B*i	0.99999932
cosh_2_6_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_6_run1.txt	cosh(x)	A+B*sqrt(i)	1.00000000
cosh_4_6_run1.txt	cosh(x)	A+B*log(i)^4	0.99999998
digamma_2_6_run1.txt	digamma(x)	A+B/i	0.99476983
digamma_1_6_run1.txt	digamma(x)	A+B*i	0.99924435
digamma_3_6_run1.txt	digamma(x)	A+B*sqrt(i)	0.99856331
digamma_4_6_run1.txt	digamma(x)	A+B*log(i)^4	0.99973165
erf_1_6_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_6_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_6_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_6_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_6_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_6_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_6_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_6_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_6_run1.txt	FresnelCosine(x)	A+B*i	0.99690244
FresnelCosine_2_6_run1.txt	FresnelCosine(x)	A+B/i	0.98028694
FresnelCosine_3_6_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.99947366
FresnelCosine_4_6_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.97493391
FresnelSine_1_6_run1.txt	FresnelSine(x)	A+B*i	0.98545120

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine_2_6_run1.txt	FresnelSine(x)	A+B/i	0.99364134
FresnelSine_3_6_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.99908329
FresnelSine_4_6_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.93365861
J0x_1_6_run1.txt	J0(x)	A+B*i	0.98837474
J0x_2_6_run1.txt	J0(x)	A+B/i	0.99382826
J0x_3_6_run1.txt	J0(x)	A+B*sqrt(i)	0.98327636
J0x_4_6_run1.txt	J0(x)	A+B*log(i)^4	0.99104270
J1x_1_6_run1.txt	J1(x)	A+B*i	0.97955202
J1x_2_6_run1.txt	J1(x)	A+B/i	0.98569158
J1x_3_6_run1.txt	J1(x)	A+B*sqrt(i)	0.99144200
J1x_4_6_run1.txt	J1(x)	A+B*log(i)^4	0.98407499
J2x_1_6_run1.txt	J2(x)	A+B*i	0.99989825
J2x_2_6_run1.txt	J2(x)	A+B/i	0.99996711
J2x_3_6_run1.txt	J2(x)	A+B*sqrt(i)	0.98764817
J2x_4_6_run1.txt	J2(x)	A+B*log(i)^4	0.99986861
J3x_1_6_run1.txt	J3(x)	A+B*i	0.99978586
J3x_2_6_run1.txt	J3(x)	A+B/i	0.99989650
J3x_3_6_run1.txt	J3(x)	A+B*sqrt(i)	0.99989738
J3x_4_6_run1.txt	J3(x)	A+B*log(i)^4	0.97330611
J4x_1_6_run1.txt	J4(x)	A+B*i	0.99761942
J4x_2_6_run1.txt	J4(x)	A+B/i	0.99952851
J4x_3_6_run1.txt	J4(x)	A+B*sqrt(i)	0.98520043
J4x_4_6_run1.txt	J4(x)	A+B*log(i)^4	0.97901234
J5x_1_6_run1.txt	J5(x)	A+B*i	0.81296540
J5x_2_6_run1.txt	J5(x)	A+B/i	0.99985675
J5x_3_6_run1.txt	J5(x)	A+B*sqrt(i)	0.88448113
J5x_4_6_run1.txt	J5(x)	A+B*log(i)^4	0.99677928
ln_1_6_run1.txt	ln(x)	A+B*i	0.99999415
ln_2_6_run1.txt	ln(x)	A+B/i	0.99999997
ln_3_6_run1.txt	ln(x)	A+B*sqrt(i)	0.99999527
ln_4_6_run1.txt	ln(x)	A+B*log(i)^4	0.99998623
log10Gamma_1_6_run1.txt	log10Gamma(x)	A+B*i	0.99999851
log10Gamma_2_6_run1.txt	log10Gamma(x)	A+B/i	0.99999969
log10Gamma_3_6_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999954
log10Gamma_4_6_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999894
log_1_6_run1.txt	log(x)	A+B*i	0.99998323
log_2_6_run1.txt	log(x)	A+B/i	0.99999996
log_3_6_run1.txt	log(x)	A+B*sqrt(i)	0.99999500
log_4_6_run1.txt	log(x)	A+B*log(i)^4	0.99999679
pwr10_1_6_run1.txt	10^x	A+B*i	1.00000000
pwr10_2_6_run1.txt	10^x	A+B/i	1.00000000
pwr10_3_6_run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10_4_6_run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh_1_6_run1.txt	sinh(x)	A+B*i	0.99999997
sinh_2_6_run1.txt	sinh(x)	A+B/i	1.00000000
sinh_3_6_run1.txt	sinh(x)	A+B*sqrt(i)	1.00000000
sinh_4_6_run1.txt	sinh(x)	A+B*log(i)^4	0.99999995
Si_1_6_run1.txt	Si(x)	A+B*i	0.99999618
Si_2_6_run1.txt	Si(x)	A+B/i	0.99799605

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si_3_6_run1.txt	Si (x)	A+B*sqrt(i)	0.99851309
Si_4_6_run1.txt	Si (x)	A+B*log(i)^4	0.99987822
tanh_1_6_run1.txt	tanh (x)	A+B*i	0.99999999
tanh_2_6_run1.txt	tanh (x)	A+B/i	1.00000000
tanh_3_6_run1.txt	tanh (x)	A+B*sqrt(i)	1.00000000
tanh_4_6_run1.txt	tanh (x)	A+B*log(i)^4	0.99999999
tan_1_6_run1.txt	tan (x)	A+B*i	1.00000000
tan_2_6_run1.txt	tan (x)	A+B/i	1.00000000
tan_3_6_run1.txt	tan (x)	A+B*sqrt(i)	1.00000000
tan_4_6_run1.txt	tan (x)	A+B*log(i)^4	1.00000000
tinvl_1_6_run1.txt	tinvl(0.95,x)	A+B*i	0.85121571
tinvl_2_6_run1.txt	tinvl(0.95,x)	A+B/i	0.87207010
tinvl_3_6_run1.txt	tinvl(0.95,x)	A+B*sqrt(i)	0.89400352
tinvl_4_6_run1.txt	tinvl(0.95,x)	A+B*log(i)^4	0.93540658
tinvs_1_6_run1.txt	tinvs(0.975,x)	A+B*i	0.82410333
tinvs_2_6_run1.txt	tinvs(0.975,x)	A+B/i	0.90988051
tinvs_3_6_run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.87810579
tinvs_4_6_run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.90407269
trigamma_1_6_run1.txt	trigamma (x)	A+B*i	0.83092670
trigamma_2_6_run1.txt	trigamma (x)	A+B/i	0.81009461
trigamma_3_6_run1.txt	trigamma (x)	A+B*sqrt(i)	0.77335300
trigamma_4_6_run1.txt	trigamma (x)	A+B*log(i)^4	0.79661991

Alternating Sine/Cosine Series of Order 7

The next table shows a summary of results for the Sine series of the order 7:

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_1 * \cos(S_2 * gx(2,A_2,B_2) + Os_2) \\ + \dots + a_7 * \sin(S_7 * gx(7,A_7,B_7) + Os_7) + a_8 * x + a_9 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 7 Sine Cosine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_7_run1.txt	acosh(x)	A+B*i	0.99744938
acosh_2_7_run1.txt	acosh(x)	A+B/i	0.99787594
acosh_3_7_run1.txt	acosh(x)	A+B*sqrt(i)	0.99354484
acosh_4_7_run1.txt	acosh(x)	A+B*log(i)^4	0.99621071
arccos_1_7_run1.txt	arccos(x)	A+B*i	0.99987577
arccos_2_7_run1.txt	arccos(x)	A+B/i	0.99987258
arccos_3_7_run1.txt	arccos(x)	A+B*sqrt(i)	0.99987649
arccos_4_7_run1.txt	arccos(x)	A+B*log(i)^4	0.99980272
arcsin_1_7_run1.txt	arcsin(x)	A+B*i	0.99986164
arcsin_2_7_run1.txt	arcsin(x)	A+B/i	0.99986462
arcsin_3_7_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99986708
arcsin_4_7_run1.txt	arcsin(x)	A+B*log(i)^4	0.99984769
arctan_1_7_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_7_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_7_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_7_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_7_run1.txt	asinh(x)	A+B*i	0.99329824
asinh_2_7_run1.txt	asinh(x)	A+B/i	0.99830154
asinh_3_7_run1.txt	asinh(x)	A+B*sqrt(i)	0.99429340
asinh_4_7_run1.txt	asinh(x)	A+B*log(i)^4	0.99630449
atanh_1_7_run1.txt	atanh(x)	A+B*i	0.99739560
atanh_2_7_run1.txt	atanh(x)	A+B/i	0.99752945
atanh_3_7_run1.txt	atanh(x)	A+B*sqrt(i)	0.99763912
atanh_4_7_run1.txt	atanh(x)	A+B*log(i)^4	0.99669283
CI_1_7_run1.txt	Ci(x)	A+B*i	0.96483000
Ci_2_7_run1.txt	Ci(x)	A+B/i	0.99925423
Ci_3_7_run1.txt	Ci(x)	A+B*sqrt(i)	0.98990612
CI_4_7_run1.txt	Ci(x)	A+B*log(i)^4	0.99074825
cosh_1_7_run1.txt	cosh(x)	A+B*i	0.99999915
cosh_2_7_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_7_run1.txt	cosh(x)	A+B*sqrt(i)	1.00000000
cosh_4_7_run1.txt	cosh(x)	A+B*log(i)^4	1.00000000
digamma_2_7_run1.txt	digamma(x)	A+B/i	0.99587579
digamma_1_7_run1.txt	digamma(x)	A+B*i	0.99724744
digamma_3_7_run1.txt	digamma(x)	A+B*sqrt(i)	0.99850668
digamma_4_7_run1.txt	digamma(x)	A+B*log(i)^4	0.99943894
erf_1_7_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_7_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_7_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_7_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_7_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_7_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_7_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_7_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_7_run1.txt	FresnelCosine(x)	A+B*i	0.99463498
FresnelCosine_2_7_run1.txt	FresnelCosine(x)	A+B/i	0.99486117
FresnelCosine_3_7_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.94757086
FresnelCosine_4_7_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.99969445
FresnelSine_1_7_run1.txt	FresnelSine(x)	A+B*i	0.99957623

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine_2_7_run1.txt	FresnelSine(x)	A+B/i	0.99876121
FresnelSine_3_7_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.99987001
FresnelSine_4_7_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.97172136
J0x_1_7_run1.txt	J0(x)	A+B*i	0.98021886
J0x_2_7_run1.txt	J0(x)	A+B/i	0.98299715
J0x_3_7_run1.txt	J0(x)	A+B*sqrt(i)	0.99605346
J0x_4_7_run1.txt	J0(x)	A+B*log(i)^4	0.99455109
J1x_1_7_run1.txt	J1(x)	A+B*i	0.99808890
J1x_2_7_run1.txt	J1(x)	A+B/i	0.99512874
J1x_3_7_run1.txt	J1(x)	A+B*sqrt(i)	0.98236777
J1x_4_7_run1.txt	J1(x)	A+B*log(i)^4	0.95044901
J2x_1_7_run1.txt	J2(x)	A+B*i	0.97919683
J2x_2_7_run1.txt	J2(x)	A+B/i	0.99968710
J2x_3_7_run1.txt	J2(x)	A+B*sqrt(i)	0.99741807
J2x_4_7_run1.txt	J2(x)	A+B*log(i)^4	0.94465696
J3x_1_7_run1.txt	J3(x)	A+B*i	0.99989105
J3x_2_7_run1.txt	J3(x)	A+B/i	0.99928748
J3x_3_7_run1.txt	J3(x)	A+B*sqrt(i)	0.99626685
J3x_4_7_run1.txt	J3(x)	A+B*log(i)^4	0.99435762
J4x_1_7_run1.txt	J4(x)	A+B*i	0.89132841
J4x_2_7_run1.txt	J4(x)	A+B/i	0.99999228
J4x_3_7_run1.txt	J4(x)	A+B*sqrt(i)	0.99992634
J4x_4_7_run1.txt	J4(x)	A+B*log(i)^4	0.98506012
J5x_1_7_run1.txt	J5(x)	A+B*i	0.99991088
J5x_2_7_run1.txt	J5(x)	A+B/i	0.95264485
J5x_3_7_run1.txt	J5(x)	A+B*sqrt(i)	0.98464792
J5x_4_7_run1.txt	J5(x)	A+B*log(i)^4	0.99960317
ln_1_7_run1.txt	ln(x)	A+B*i	0.99998236
ln_2_7_run1.txt	ln(x)	A+B/i	0.99999996
ln_3_7_run1.txt	ln(x)	A+B*sqrt(i)	0.99999617
ln_4_7_run1.txt	ln(x)	A+B*log(i)^4	0.99999515
log10Gamma_1_7_run1.txt	log10Gamma(x)	A+B*i	0.99999938
log10Gamma_2_7_run1.txt	log10Gamma(x)	A+B/i	0.99999786
log10Gamma_3_7_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999793
log10Gamma_4_7_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999981
log_1_7_run1.txt	log(x)	A+B*i	0.99999318
log_2_7_run1.txt	log(x)	A+B/i	0.99999999
log_3_7_run1.txt	log(x)	A+B*sqrt(i)	0.99999883
log_4_7_run1.txt	log(x)	A+B*log(i)^4	0.99999918
pwr10_1_7_run1.txt	10^x	A+B*i	1.00000000
pwr10_2_7_run1.txt	10^x	A+B/i	1.00000000
pwr10_3_7_run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10_4_7_run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh_1_7_run1.txt	sinh(x)	A+B*i	0.99999999
sinh_2_7_run1.txt	sinh(x)	A+B/i	1.00000000
sinh_3_7_run1.txt	sinh(x)	A+B*sqrt(i)	1.00000000
sinh_4_7_run1.txt	sinh(x)	A+B*log(i)^4	1.00000000
Si_1_7_run1.txt	Si(x)	A+B*i	0.99918995
Si_2_7_run1.txt	Si(x)	A+B/i	0.99971364

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si_3_7_run1.txt	Si(x)	A+B*sqrt(i)	0.99984011
Si_4_7_run1.txt	Si(x)	A+B*log(i)^4	0.95716724
tanh_1_7_run1.txt	tanh(x)	A+B*i	1.00000000
tanh_2_7_run1.txt	tanh(x)	A+B/i	1.00000000
tanh_3_7_run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh_4_7_run1.txt	tanh(x)	A+B*log(i)^4	1.00000000
tan_1_7_run1.txt	tan(x)	A+B*i	1.00000000
tan_2_7_run1.txt	tan(x)	A+B/i	1.00000000
tan_3_7_run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan_4_7_run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl_1_7_run1.txt	tinvl(0.95,x)	A+B*i	0.88074531
tinvl_2_7_run1.txt	tinvl(0.95,x)	A+B/i	0.90715049
tinvl_3_7_run1.txt	tinvl(0.95,x)	A+B*sqrt(i)	0.87275941
tinvl_4_7_run1.txt	tinvl(0.95,x)	A+B*log(i)^4	0.93873506
tinvs_1_7_run1.txt	tinvs(0.975,x)	A+B*i	0.86523086
tinvs_2_7_run1.txt	tinvs(0.975,x)	A+B/i	0.95624407
tinvs_3_7_run1.txt	tinvs(0.975,x)	A+B*sqrt(i)	0.88657344
tinvs_4_7_run1.txt	tinvs(0.975,x)	A+B*log(i)^4	0.92551237
trigamma_1_7_run1.txt	trigamma(x)	A+B*i	0.70225834
trigamma_2_7_run1.txt	trigamma(x)	A+B/i	0.71048201
trigamma_3_7_run1.txt	trigamma(x)	A+B*sqrt(i)	0.91361980
trigamma_4_7_run1.txt	trigamma(x)	A+B*log(i)^4	0.82467278

Alternating Cosine/Sine Series of Order 7

The next table shows a summary of results for the Sine series of the order 7:

$$Y = a_0 + a_1 * \cos(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \sin(S_2 * gx(2,A_2,B_2) + Os_2) \\ + \dots + a_7 * \cos(S_7 * gx(7,A_7,B_7) + Os_7) + a_8 * x + a_9 * x^2$$

The output text files for this series are located in the following folder:

Fourier-Shammas Series Approximations Quadratic Fit with 7 Cosine Sine

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
acosh_1_7_run1.txt	acosh(x)	A+B*i	0.99550696
acosh_2_7_run1.txt	acosh(x)	A+B/i	0.99621099
acosh_3_7_run1.txt	acosh(x)	A+B*sqrt(i)	0.99425758
acosh_4_7_run1.txt	acosh(x)	A+B*log(i)^4	0.99695075
arccos_1_7_run1.txt	arccos(x)	A+B*i	0.99988080
arccos_2_7_run1.txt	arccos(x)	A+B/i	0.99985183
arccos_3_7_run1.txt	arccos(x)	A+B*sqrt(i)	0.99987632
arccos_4_7_run1.txt	arccos(x)	A+B*log(i)^4	0.99985867
arcsin_1_7_run1.txt	arcsin(x)	A+B*i	0.99986556
arcsin_2_7_run1.txt	arcsin(x)	A+B/i	0.99986654
arcsin_3_7_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99986813
arcsin_4_7_run1.txt	arcsin(x)	A+B*log(i)^4	0.99987263
arctan_1_7_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_7_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_7_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_7_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_7_run1.txt	asinh(x)	A+B*i	0.99184272
asinh_2_7_run1.txt	asinh(x)	A+B/i	0.99747727
asinh_3_7_run1.txt	asinh(x)	A+B*sqrt(i)	0.99874930
asinh_4_7_run1.txt	asinh(x)	A+B*log(i)^4	0.99467054
atanh_1_7_run1.txt	atanh(x)	A+B*i	0.99748567
atanh_2_7_run1.txt	atanh(x)	A+B/i	0.99763229
atanh_3_7_run1.txt	atanh(x)	A+B*sqrt(i)	0.99751822
atanh_4_7_run1.txt	atanh(x)	A+B*log(i)^4	0.99727056
CI_1_7_run1.txt	Ci(x)	A+B*i	0.94403836
Ci_2_7_run1.txt	Ci(x)	A+B/i	0.94212465
Ci_3_7_run1.txt	Ci(x)	A+B*sqrt(i)	0.98375595
CI_4_7_run1.txt	Ci(x)	A+B*log(i)^4	0.96161538
cosh_1_7_run1.txt	cosh(x)	A+B*i	0.99999995
cosh_2_7_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_7_run1.txt	cosh(x)	A+B*sqrt(i)	0.99999999
cosh_4_7_run1.txt	cosh(x)	A+B*log(i)^4	1.00000000
digamma_2_7_run1.txt	digamma(x)	A+B/i	0.99967134
digamma_1_7_run1.txt	digamma(x)	A+B*i	0.99704062
digamma_3_7_run1.txt	digamma(x)	A+B*sqrt(i)	0.99903232
digamma_4_7_run1.txt	digamma(x)	A+B*log(i)^4	0.99981980
erf_1_7_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_7_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_7_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_7_run1.txt	erf(x)	A+B*log(i)^4	1.00000000
exp_1_7_run1.txt	exp(x)	A+B*i	1.00000000
exp_2_7_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_7_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_7_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_7_run1.txt	FresnelCosine(x)	A+B*i	0.94607526
FresnelCosine_2_7_run1.txt	FresnelCosine(x)	A+B/i	0.95130615
FresnelCosine_3_7_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.99351336
FresnelCosine_4_7_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.98041880
FresnelSine_1_7_run1.txt	FresnelSine(x)	A+B*i	0.99798900

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
FresnelSine_2_7_run1.txt	FresnelSine(x)	A+B/i	0.98247653
FresnelSine_3_7_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.99782000
FresnelSine_4_7_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.96009727
J0x_1_7_run1.txt	J0(x)	A+B*i	0.97784114
J0x_2_7_run1.txt	J0(x)	A+B/i	0.99855451
J0x_3_7_run1.txt	J0(x)	A+B*sqrt(i)	0.97061214
J0x_4_7_run1.txt	J0(x)	A+B*log(i)^4	0.99323557
J1x_1_7_run1.txt	J1(x)	A+B*i	0.99999614
J1x_2_7_run1.txt	J1(x)	A+B/i	0.99994803
J1x_3_7_run1.txt	J1(x)	A+B*sqrt(i)	0.94111914
J1x_4_7_run1.txt	J1(x)	A+B*log(i)^4	0.99372410
J2x_1_7_run1.txt	J2(x)	A+B*i	0.98148601
J2x_2_7_run1.txt	J2(x)	A+B/i	0.99942416
J2x_3_7_run1.txt	J2(x)	A+B*sqrt(i)	0.98907707
J2x_4_7_run1.txt	J2(x)	A+B*log(i)^4	0.97356691
J3x_1_7_run1.txt	J3(x)	A+B*i	0.97667203
J3x_2_7_run1.txt	J3(x)	A+B/i	0.97790495
J3x_3_7_run1.txt	J3(x)	A+B*sqrt(i)	0.99291794
J3x_4_7_run1.txt	J3(x)	A+B*log(i)^4	0.99975615
J4x_1_7_run1.txt	J4(x)	A+B*i	0.91108023
J4x_2_7_run1.txt	J4(x)	A+B/i	0.97095195
J4x_3_7_run1.txt	J4(x)	A+B*sqrt(i)	0.92955574
J4x_4_7_run1.txt	J4(x)	A+B*log(i)^4	0.95546049
J5x_1_7_run1.txt	J5(x)	A+B*i	0.91720280
J5x_2_7_run1.txt	J5(x)	A+B/i	0.99112606
J5x_3_7_run1.txt	J5(x)	A+B*sqrt(i)	0.96364745
J5x_4_7_run1.txt	J5(x)	A+B*log(i)^4	0.99972639
ln_1_7_run1.txt	ln(x)	A+B*i	0.99998496
ln_2_7_run1.txt	ln(x)	A+B/i	0.99999999
ln_3_7_run1.txt	ln(x)	A+B*sqrt(i)	0.99998737
ln_4_7_run1.txt	ln(x)	A+B*log(i)^4	0.99999856
log10Gamma_1_7_run1.txt	log10Gamma(x)	A+B*i	0.99999769
log10Gamma_2_7_run1.txt	log10Gamma(x)	A+B/i	0.99999920
log10Gamma_3_7_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999924
log10Gamma_4_7_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999976
log_1_7_run1.txt	log(x)	A+B*i	0.99998060
log_2_7_run1.txt	log(x)	A+B/i	0.99999999
log_3_7_run1.txt	log(x)	A+B*sqrt(i)	0.99999820
log_4_7_run1.txt	log(x)	A+B*log(i)^4	0.99999594
pwr10_1_7_run1.txt	10^x	A+B*i	1.00000000
pwr10_2_7_run1.txt	10^x	A+B/i	1.00000000
pwr10_3_7_run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10_4_7_run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh_1_7_run1.txt	sinh(x)	A+B*i	0.99999991
sinh_2_7_run1.txt	sinh(x)	A+B/i	1.00000000
sinh_3_7_run1.txt	sinh(x)	A+B*sqrt(i)	0.99999999
sinh_4_7_run1.txt	sinh(x)	A+B*log(i)^4	0.99999999
Si_1_7_run1.txt	Si(x)	A+B*i	0.98231661
Si_2_7_run1.txt	Si(x)	A+B/i	0.99911949

<i>Filename</i>	<i>Function</i>	<i>gx(i,A,B)</i>	<i>Rsqr Adj</i>
Si_3_7_run1.txt	Si(x)	A+B*sqrt(i)	0.99179234
Si_4_7_run1.txt	Si(x)	A+B*log(i)^4	0.99998478
tanh_1_7_run1.txt	tanh(x)	A+B*i	0.99999999
tanh_2_7_run1.txt	tanh(x)	A+B/i	1.00000000
tanh_3_7_run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh_4_7_run1.txt	tanh(x)	A+B*log(i)^4	0.99999999
tan_1_7_run1.txt	tan(x)	A+B*i	1.00000000
tan_2_7_run1.txt	tan(x)	A+B/i	1.00000000
tan_3_7_run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan_4_7_run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinvl_1_7_run1.txt	tinvl(0.95,x)	A+B*i	0.85996354
tinvl_2_7_run1.txt	tinvl(0.95,x)	A+B/i	0.98338132
tinvl_3_7_run1.txt	tinvl(0.95,x)	A+B*sqrt(i)	0.90033835
tinvl_4_7_run1.txt	tinvl(0.95,x)	A+B*log(i)^4	0.91054049
tinvs2_1_7_run1.txt	tinvs2(0.975,x)	A+B*i	0.88212762
tinvs2_2_7_run1.txt	tinvs2(0.975,x)	A+B/i	0.97455178
tinvs2_3_7_run1.txt	tinvs2(0.975,x)	A+B*sqrt(i)	0.92990800
tinvs2_4_7_run1.txt	tinvs2(0.975,x)	A+B*log(i)^4	0.94766331
trigamma_1_7_run1.txt	trigamma(x)	A+B*i	0.76554916
trigamma_2_7_run1.txt	trigamma(x)	A+B/i	0.76590982
trigamma_3_7_run1.txt	trigamma(x)	A+B*sqrt(i)	0.80058635
trigamma_4_7_run1.txt	trigamma(x)	A+B*log(i)^4	0.87283575