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. Eacg section has a table for a specific Fourier-Shammas series.

OUTPUT FILES MAPS

Sine Series of Order 3

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

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \sin(S_2 * gx(2,A_2,B_2) + Os_2) +$$

$$a_3 * \sin(S_3 * gx(3,A_3,B_3) + Os_1)$$

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

Fourier-Shammas Series Approximations 3 Sine

     Version 1.00.00

Filename	Function	gx(i,A,B)	Rsqr Adj
`acosh_1_3_sin_run1.txt`	`acosh(x)`	`A+B*i`	0.98296927
`acosh_2_3_sin_run1.txt`	`acosh(x)`	`A+B/i`	0.95692902
`acosh_3_3_sin_run1.txt`	`acosh(x)`	`A+B*sqrt(i)`	0.93425668
`acosh_4_3_sin_run1.txt`	`acosh(x)`	`A+B*log(i)^4`	0.97688977
`arccos_1_3_sin_run1.txt`	`arccos(x)`	`A+B*i`	0.99889253
`arccos_2_3_sin_run1.txt`	`arccos(x)`	`A+B/i`	0.99901538
`arccos_3_3_sin_run1.txt`	`arccos(x)`	`A+B*sqrt(i)`	0.99891151
`arccos_4_3_sin_run1.txt`	`arccos(x)`	`A+B*log(i)^4`	0.99848277
`arcsin_1_3_sin_run1.txt`	`arcsin(x)`	`A+B*i`	0.99889601
`arcsin_2_3_sin_run1.txt`	`arcsin(x)`	`A+B/i`	0.99893293
`arcsin_3_3_sin_run1.txt`	`arcsin(x)`	`A+B*sqrt(i)`	0.99899970
`arcsin_4_3_sin_run1.txt`	`arcsin(x)`	`A+B*log(i)^4`	0.99910005
`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`	0.91831306
`asinh_2_3_sin_run1.txt`	`asinh(x)`	`A+B/i`	0.93555781
`asinh_3_3_sin_run1.txt`	`asinh(x)`	`A+B*sqrt(i)`	0.92131484
`asinh_4_3_sin_run1.txt`	`asinh(x)`	`A+B*log(i)^4`	0.97206485
`atanh_1_3_sin_run1.txt`	`atanh(x)`	`A+B*i`	0.98265958
`atanh_2_3_sin_run1.txt`	`atanh(x)`	`A+B/i`	0.98378695
`atanh_3_3_sin_run1.txt`	`atanh(x)`	`A+B*sqrt(i)`	0.98567743
`atanh_4_3_sin_run1.txt`	`atanh(x)`	`A+B*log(i)^4`	0.98490823
`CI_1_3_sin_run1.txt`	`Ci(x)`	`A+B*i`	0.93814279
`Ci_2_3_sin_run1.txt`	`Ci(x)`	`A+B/i`	0.94294538
`Ci_3_3_sin_run1.txt`	`Ci(x)`	`A+B*sqrt(i)`	0.92382752
`CI_4_3_sin_run1.txt`	`Ci(x)`	`A+B*log(i)^4`	0.92444941
`cosh_1_3_sin_run1.txt`	`cosh(x)`	`A+B*i`	0.99984546
`cosh_2_3_sin_run1.txt`	`cosh(x)`	`A+B/i`	0.99998948
`cosh_3_3_sin_run1.txt`	`cosh(x)`	`A+B*sqrt(i)`	0.99996255
`cosh_4_3_sin_run1.txt`	`cosh(x)`	`A+B*log(i)^4`	0.99996372
`diamma_2_3_sin_run1.txt`	`digamma(x)`	`A+B/i`	0.96570853
`digamma_1_3_sin_run1.txt`	`digamma(x)`	`A+B*i`	0.99222342
`digamma_3_3_sin_run1.txt`	`digamma(x)`	`A+B*sqrt(i)`	0.95066045
`digamma_4_3_sin_run1.txt`	`digamma(x)`	`A+B*log(i)^4`	0.98725146
`erf_1_3_sin_run1.txt`	`erf(x)`	`A+B*i`	0.99999996
`erf_2_3_sin_run1.txt`	`erf(x)`	`A+B/i`	0.99999962
`erf_3_3_sin_run1.txt`	`erf(x)`	`A+B*sqrt(i)`	0.99999990
`erf_4_3_sin_run1.txt`	`erf(x)`	`A+B*log(i)^4`	0.99999991
`exp_1_3_sin_run1.txt`	`exp(x)`	`A+B*i`	0.99999999
`exp_2_3_sin_run1.txt`	`exp(x)`	`A+B/i`	0.99999979
`exp_3_3_sin_run1.txt`	`exp(x)`	`A+B*sqrt(i)`	0.99999998
`exp_4_3_sin_run1.txt`	`exp(x)`	`A+B*log(i)^4`	0.99999955
`FresnelCosine_1_3_sin_run1.txt`	`FresnelCosine(x)`	`A+B*i`	0.66832414
`FresnelCosine_2_3_sin_run1.txt`	`FresnelCosine(x)`	`A+B/i`	0.81410198
`FresnelCosine_3_3_sin_run1.txt`	`FresnelCosine(x)`	`A+B*sqrt(i)`	0.77336851
`FresnelCosine_4_3_sin_run1.txt`	`FresnelCosine(x)`	`A+B*log(i)^4`	0.77693497
`FresnelSine_1_3_sin_run1.txt`	`FresnelSine(x)`	`A+B*i`	0.90489518

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Filename	Function	gx(i,A,B)	Rsqr Adj
`FresnelSine_2_3_sin_run1.txt`	`FresnelSine(x)`	`A+B/i`	0.86370537
`FresnelSine_3_3_sin_run1.txt`	`FresnelSine(x)`	`A+B*sqrt(i)`	0.86678004
`FresnelSine_4_3_sin_run1.txt`	`FresnelSine(x)`	`A+B*log(i)^4`	0.83319074
`J0x_1_3_sin_run1.txt`	`J0(x)`	`A+B*i`	0.97837334
`J0x_2_3_sin_run1.txt`	`J0(x)`	`A+B/i`	0.98060318
`J0x_3_3_sin_run1.txt`	`J0(x)`	`A+B*sqrt(i)`	0.99399408
`J0x_4_3_sin_run1.txt`	`J0(x)`	`A+B*log(i)^4`	0.97955654
`J1x_1_3_sin_run1.txt`	`J1(x)`	`A+B*i`	0.97720182
`J1x_2_3_sin_run1.txt`	`J1(x)`	`A+B/i`	0.93566317
`J1x_3_3_sin_run1.txt`	`J1(x)`	`A+B*sqrt(i)`	0.86900856
`J1x_4_3_sin_run1.txt`	`J1(x)`	`A+B*log(i)^4`	0.97014124
`J2x_1_3_sin_run1.txt`	`J2(x)`	`A+B*i`	0.94048907
`J2x_2_3_sin_run1.txt`	`J2(x)`	`A+B/i`	0.90661313
`J2x_3_3_sin_run1.txt`	`J2(x)`	`A+B*sqrt(i)`	0.84237068
`J2x_4_3_sin_run1.txt`	`J2(x)`	`A+B*log(i)^4`	0.90697861
`J3x_1_3_sin_run1.txt`	`J3(x)`	`A+B*i`	0.94910696
`J3x_2_3_sin_run1.txt`	`J3(x)`	`A+B/i`	0.88852730
`J3x_3_3_sin_run1.txt`	`J3(x)`	`A+B*sqrt(i)`	0.87329458
`J3x_4_3_sin_run1.txt`	`J3(x)`	`A+B*log(i)^4`	0.89659188
`J4x_1_3_sin_run1.txt`	`J4(x)`	`A+B*i`	0.91898376
`J4x_2_3_sin_run1.txt`	`J4(x)`	`A+B/i`	0.91911645
`J4x_3_3_sin_run1.txt`	`J4(x)`	`A+B*sqrt(i)`	0.82692878
`J4x_4_3_sin_run1.txt`	`J4(x)`	`A+B*log(i)^4`	0.91241795
`J5x_1_3_sin_run1.txt`	`J5(x)`	`A+B*i`	0.89996624
`J5x_2_3_sin_run1.txt`	`J5(x)`	`A+B/i`	0.88552155
`J5x_3_3_sin_run1.txt`	`J5(x)`	`A+B*sqrt(i)`	0.78471767
`J5x_4_3_sin_run1.txt`	`J5(x)`	`A+B*log(i)^4`	0.89950532
`ln_1_3_sin_run1.txt`	`ln(x)`	`A+B*i`	0.99929085
`ln_2_3_sin_run1.txt`	`ln(x)`	`A+B/i`	0.99993053
`ln_3_3_sin_run1.txt`	`ln(x)`	`A+B*sqrt(i)`	0.99995396
`ln_4_3_sin_run1.txt`	`ln(x)`	`A+B*log(i)^4`	0.99986198
`log10Gamma_1_3_sin_run1.txt`	`log10Gamma(x)`	`A+B*i`	0.99998687
`log10Gamma_2_3_sin_run1.txt`	`log10Gamma(x)`	`A+B/i`	0.99995327
`log10Gamma_3_3_sin_run1.txt`	`log10Gamma(x)`	`A+B*sqrt(i)`	0.99993025
`log10Gamma_4_3_sin_run1.txt`	`log10Gamma(x)`	`A+B*log(i)^4`	0.99993026
`log_1_3_sin_run1.txt`	`log(x)`	`A+B*i`	0.99945907
`log_2_3_sin_run1.txt`	`log(x)`	`A+B/i`	0.99992368
`log_3_3_sin_run1.txt`	`log(x)`	`A+B*sqrt(i)`	0.99985067
`log_4_3_sin_run1.txt`	`log(x)`	`A+B*log(i)^4`	0.99984969
`pwr10_1_3_sin_run1.txt`	`10^x`	`A+B*i`	0.99999783
`pwr10_2_3_sin_run1.txt`	`10^x`	`A+B/i`	0.99999937
`pwr10_3_3_sin_run1.txt`	`10^x`	`A+B*sqrt(i)`	0.99999976
`pwr10_4_3_sin_run1.txt`	`10^x`	`A+B*log(i)^4`	0.99999915
`sinh_1_3_sin_run1.txt`	`sinh(x)`	`A+B*i`	0.99985385
`sinh_2_3_sin_run1.txt`	`sinh(x)`	`A+B/i`	0.99982995
`sinh_3_3_sin_run1.txt`	`sinh(x)`	`A+B*sqrt(i)`	0.99996787
`sinh_4_3_sin_run1.txt`	`sinh(x)`	`A+B*log(i)^4`	0.99995997
`Si_1_3_sin_run1.txt`	`Si(x)`	`A+B*i`	0.89710847
`Si_2_3_sin_run1.txt`	`Si(x)`	`A+B/i`	0.89388447

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_3_sin_run1.txt	Si(x)	A+B*sqrt(i)	0.94561420
Si_4_3_sin_run1.txt	Si(x)	A+B*log(i)^4	0.97741410
tanh_1_3_sin_run1.txt	tanh(x)	A+B*i	0.99999510
tanh_2_3_sin_run1.txt	tanh(x)	A+B/i	0.99999595
tanh_3_3_sin_run1.txt	tanh(x)	A+B*sqrt(i)	0.99999740
tanh_4_3_sin_run1.txt	tanh(x)	A+B*log(i)^4	0.99998008
tan_1_3_sin_run1.txt	tan(x)	A+B*i	0.99999983
tan_2_3_sin_run1.txt	tan(x)	A+B/i	0.99999660
tan_3_3_sin_run1.txt	tan(x)	A+B*sqrt(i)	0.99998988
tan_4_3_sin_run1.txt	tan(x)	A+B*log(i)^4	0.99999893
tinv1_1_3_sin_run1.txt	tinv(0.95,x)	A+B*i	0.76001523
tinv1_2_3_sin_run1.txt	tinv(0.95,x)	A+B/i	0.65154237
tinv1_3_3_sin_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.54487513
tinv1_4_3_sin_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.73271250
tinv2_1_3_sin_run1.txt	tinv(0.975,x)	A+B*i	0.75435429
tinv2_2_3_sin_run1.txt	tinv(0.975,x)	A+B/i	0.63446835
tinv2_3_3_sin_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.51914227
tinv2_4_3_sin_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.70425253
trigamma_1_3_sin_run1.txt	trigamma(x)	A+B*i	0.63967500
trigamma_2_3_sin_run1.txt	trigamma(x)	A+B/i	0.52086107
trigamma_3_3_sin_run1.txt	trigamma(x)	A+B*sqrt(i)	0.40715937
trigamma_4_3_sin_run1.txt	trigamma(x)	A+B*log(i)^4	0.50586566

Sine Series of Order 4

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

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \sin(S_2 * gx(2,A_2,B_2) + Os_2) +$$

$$a_3 * \sin(S_3 * gx(3,A_3,B_3) + Os_3) + a_4 * \sin(S_4 * gx(4,A_4,B_4) + Os_4)$$

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

Fourier-Shammas Series Approximations 4 Sine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_4_sin_run1.txt	acosh(x)	A+B*i	0.98500360
acosh_2_4_sin_run1.txt	acosh(x)	A+B/i	0.95609330
acosh_3_4_sin_run1.txt	acosh(x)	A+B*sqrt(i)	0.97868197
acosh_4_4_sin_run1.txt	acosh(x)	A+B*log(i)^4	0.97773437
arccos_1_4_sin_run1.txt	arccos(x)	A+B*i	0.99926391
arccos_2_4_sin_run1.txt	arccos(x)	A+B/i	0.99916890
arccos_3_4_sin_run1.txt	arccos(x)	A+B*sqrt(i)	0.99926752
arccos_4_4_sin_run1.txt	arccos(x)	A+B*log(i)^4	0.99931632
arcsin_1_4_sin_run1.txt	arcsin(x)	A+B*i	0.99929632
arcsin_2_4_sin_run1.txt	arcsin(x)	A+B/i	0.99916814
arcsin_3_4_sin_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99924446
arcsin_4_4_sin_run1.txt	arcsin(x)	A+B*log(i)^4	0.99932340
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	0.98925970
asinh_2_4_sin_run1.txt	asinh(x)	A+B/i	0.93495475
asinh_3_4_sin_run1.txt	asinh(x)	A+B*sqrt(i)	0.97799489
asinh_4_4_sin_run1.txt	asinh(x)	A+B*log(i)^4	0.99179891
atanh_1_4_sin_run1.txt	atanh(x)	A+B*i	0.98901912
atanh_2_4_sin_run1.txt	atanh(x)	A+B/i	0.98837589
atanh_3_4_sin_run1.txt	atanh(x)	A+B*sqrt(i)	0.98953167
atanh_4_4_sin_run1.txt	atanh(x)	A+B*log(i)^4	0.98870491
CI_1_4_sin_run1.txt	Ci(x)	A+B*i	0.94826122
Ci_2_4_sin_run1.txt	Ci(x)	A+B/i	0.85289449
Ci_3_4_sin_run1.txt	Ci(x)	A+B*sqrt(i)	0.91896075
CI_4_4_sin_run1.txt	Ci(x)	A+B*log(i)^4	0.93158388
cosh_1_4_sin_run1.txt	cosh(x)	A+B*i	0.99996331
cosh_2_4_sin_run1.txt	cosh(x)	A+B/i	0.99999779
cosh_3_4_sin_run1.txt	cosh(x)	A+B*sqrt(i)	0.99999785
cosh_4_4_sin_run1.txt	cosh(x)	A+B*log(i)^4	0.99997601
diamma_2_4_sin_run1.txt	digamma(x)	A+B/i	0.97913882
digamma_1_4_sin_run1.txt	digamma(x)	A+B*i	0.99242889
digamma_3_4_sin_run1.txt	digamma(x)	A+B*sqrt(i)	0.99148140
digamma_4_4_sin_run1.txt	digamma(x)	A+B*log(i)^4	0.98239459
erf_1_4_sin_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_4_sin_run1.txt	erf(x)	A+B/i	0.99999998
erf_3_4_sin_run1.txt	erf(x)	A+B*sqrt(i)	0.99999999
erf_4_4_sin_run1.txt	erf(x)	A+B*log(i)^4	0.99999983
exp_1_4_sin_run1.txt	exp(x)	A+B*i	0.99999999
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	0.99999999
FresnelCosine_1_4_sin_run1.txt	FresnelCosine(x)	A+B*i	0.81550145
FresnelCosine_2_4_sin_run1.txt	FresnelCosine(x)	A+B/i	0.87182293
FresnelCosine_3_4_sin_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.91608728
FresnelCosine_4_4_sin_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.93812200
FresnelSine_1_4_sin_run1.txt	FresnelSine(x)	A+B*i	0.96267313

Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_4_sin_run1.txt	FresnelSine(x)	A+B/i	0.89984869
FresnelSine_3_4_sin_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.96450246
FresnelSine_4_4_sin_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.93195801
J0x_1_4_sin_run1.txt	J0(x)	A+B*i	0.98402579
J0x_2_4_sin_run1.txt	J0(x)	A+B/i	0.97392042
J0x_3_4_sin_run1.txt	J0(x)	A+B*sqrt(i)	0.88660742
J0x_4_4_sin_run1.txt	J0(x)	A+B*log(i)^4	0.99654646
J1x_1_4_sin_run1.txt	J1(x)	A+B*i	0.96560696
J1x_2_4_sin_run1.txt	J1(x)	A+B/i	0.99262714
J1x_3_4_sin_run1.txt	J1(x)	A+B*sqrt(i)	0.98193428
J1x_4_4_sin_run1.txt	J1(x)	A+B*log(i)^4	0.97200187
J2x_1_4_sin_run1.txt	J2(x)	A+B*i	0.94122625
J2x_2_4_sin_run1.txt	J2(x)	A+B/i	0.94145677
J2x_3_4_sin_run1.txt	J2(x)	A+B*sqrt(i)	0.94770884
J2x_4_4_sin_run1.txt	J2(x)	A+B*log(i)^4	0.97584959
J3x_1_4_sin_run1.txt	J3(x)	A+B*i	0.86602591
J3x_2_4_sin_run1.txt	J3(x)	A+B/i	0.97885177
J3x_3_4_sin_run1.txt	J3(x)	A+B*sqrt(i)	0.86741680
J3x_4_4_sin_run1.txt	J3(x)	A+B*log(i)^4	0.94895289
J4x_1_4_sin_run1.txt	J4(x)	A+B*i	0.91101606
J4x_2_4_sin_run1.txt	J4(x)	A+B/i	0.75974228
J4x_3_4_sin_run1.txt	J4(x)	A+B*sqrt(i)	0.79115443
J4x_4_4_sin_run1.txt	J4(x)	A+B*log(i)^4	0.92055232
J5x_1_4_sin_run1.txt	J5(x)	A+B*i	0.94973375
J5x_2_4_sin_run1.txt	J5(x)	A+B/i	0.92143302
J5x_3_4_sin_run1.txt	J5(x)	A+B*sqrt(i)	0.87171897
J5x_4_4_sin_run1.txt	J5(x)	A+B*log(i)^4	0.96818760
ln_1_4_sin_run1.txt	ln(x)	A+B*i	0.99930677
ln_2_4_sin_run1.txt	ln(x)	A+B/i	0.99997752
ln_3_4_sin_run1.txt	ln(x)	A+B*sqrt(i)	0.99998624
ln_4_4_sin_run1.txt	ln(x)	A+B*log(i)^4	0.99985449
log10Gamma_1_4_sin_run1.txt	log10Gamma(x)	A+B*i	0.99998678
log10Gamma_2_4_sin_run1.txt	log10Gamma(x)	A+B/i	0.99995714
log10Gamma_3_4_sin_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99993145
log10Gamma_4_4_sin_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999850
log_1_4_sin_run1.txt	log(x)	A+B*i	0.99941052
log_2_4_sin_run1.txt	log(x)	A+B/i	0.99998513
log_3_4_sin_run1.txt	log(x)	A+B*sqrt(i)	0.99957687
log_4_4_sin_run1.txt	log(x)	A+B*log(i)^4	0.99940503
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	0.99963096
sinh_2_4_sin_run1.txt	sinh(x)	A+B/i	0.99999664
sinh_3_4_sin_run1.txt	sinh(x)	A+B*sqrt(i)	0.99996017
sinh_4_4_sin_run1.txt	sinh(x)	A+B*log(i)^4	0.99996777
Si_1_4_sin_run1.txt	Si(x)	A+B*i	0.92494064
Si_2_4_sin_run1.txt	Si(x)	A+B/i	0.97324575

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_4_sin_run1.txt	Si(x)	A+B*sqrt(i)	0.96721198
Si_4_4_sin_run1.txt	Si(x)	A+B*log(i)^4	0.98957947
tanh_1_4_sin_run1.txt	tanh(x)	A+B*i	0.99999399
tanh_2_4_sin_run1.txt	tanh(x)	A+B/i	0.99999986
tanh_3_4_sin_run1.txt	tanh(x)	A+B*sqrt(i)	0.99999995
tanh_4_4_sin_run1.txt	tanh(x)	A+B*log(i)^4	0.99999816
tan_1_4_sin_run1.txt	tan(x)	A+B*i	0.99999982
tan_2_4_sin_run1.txt	tan(x)	A+B/i	0.99999994
tan_3_4_sin_run1.txt	tan(x)	A+B*sqrt(i)	0.99999976
tan_4_4_sin_run1.txt	tan(x)	A+B*log(i)^4	0.99999988
tinv1_1_4_sin_run1.txt	tinv(0.95,x)	A+B*i	0.78549334
tinv1_2_4_sin_run1.txt	tinv(0.95,x)	A+B/i	0.76123043
tinv1_3_4_sin_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.75035267
tinv1_4_4_sin_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.86957873
tinv2_1_4_sin_run1.txt	tinv(0.975,x)	A+B*i	0.74745276
tinv2_2_4_sin_run1.txt	tinv(0.975,x)	A+B/i	0.68366140
tinv2_3_4_sin_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.50938280
tinv2_4_4_sin_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.72945077
trigamma_1_4_sin_run1.txt	trigamma(x)	A+B*i	0.62548944
trigamma_2_4_sin_run1.txt	trigamma(x)	A+B/i	0.59463315
trigamma_3_4_sin_run1.txt	trigamma(x)	A+B*sqrt(i)	0.63336312
trigamma_4_4_sin_run1.txt	trigamma(x)	A+B*log(i)^4	0.71597636

Sine Series of Order 5

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

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

$$+ a_5 * \sin(S_5 * gx(5,A_5,B_5) + Os_5)$$

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

Fourier-Shammas Series Approximations 5 Sine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_5_sin_run1.txt	acosh(x)	A+B*i	0.97236835
acosh_2_5_sin_run1.txt	acosh(x)	A+B/i	0.96399340
acosh_3_5_sin_run1.txt	acosh(x)	A+B*sqrt(i)	0.97633861
acosh_4_5_sin_run1.txt	acosh(x)	A+B*log(i)^4	0.99045001
arccos_1_5_sin_run1.txt	arccos(x)	A+B*i	0.99949800
arccos_2_5_sin_run1.txt	arccos(x)	A+B/i	0.99951159
arccos_3_5_sin_run1.txt	arccos(x)	A+B*sqrt(i)	0.99944071
arccos_4_5_sin_run1.txt	arccos(x)	A+B*log(i)^4	0.99951499
arcsin_1_5_sin_run1.txt	arcsin(x)	A+B*i	0.99957159
arcsin_2_5_sin_run1.txt	arcsin(x)	A+B/i	0.99947840
arcsin_3_5_sin_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99951975
arcsin_4_5_sin_run1.txt	arcsin(x)	A+B*log(i)^4	0.99947912
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	0.98205968
asinh_2_5_sin_run1.txt	asinh(x)	A+B/i	0.95453529
asinh_3_5_sin_run1.txt	asinh(x)	A+B*sqrt(i)	0.97603347
asinh_4_5_sin_run1.txt	asinh(x)	A+B*log(i)^4	0.98675800
atanh_1_5_sin_run1.txt	atanh(x)	A+B*i	0.99357428
atanh_2_5_sin_run1.txt	atanh(x)	A+B/i	0.99152932
atanh_3_5_sin_run1.txt	atanh(x)	A+B*sqrt(i)	0.99271536
atanh_4_5_sin_run1.txt	atanh(x)	A+B*log(i)^4	0.99217811
CI_1_5_sin_run1.txt	Ci(x)	A+B*i	0.93213953
Ci_2_5_sin_run1.txt	Ci(x)	A+B/i	0.96725136
Ci_3_5_sin_run1.txt	Ci(x)	A+B*sqrt(i)	0.93396901
CI_4_5_sin_run1.txt	Ci(x)	A+B*log(i)^4	0.97148782
cosh_1_5_sin_run1.txt	cosh(x)	A+B*i	0.99960888
cosh_2_5_sin_run1.txt	cosh(x)	A+B/i	0.99999999
cosh_3_5_sin_run1.txt	cosh(x)	A+B*sqrt(i)	0.99995425
cosh_4_5_sin_run1.txt	cosh(x)	A+B*log(i)^4	0.99997077
diamma_2_5_sin_run1.txt	digamma(x)	A+B/i	0.97667824
digamma_1_5_sin_run1.txt	digamma(x)	A+B*i	0.99666431
digamma_3_5_sin_run1.txt	digamma(x)	A+B*sqrt(i)	0.99116106
digamma_4_5_sin_run1.txt	digamma(x)	A+B*log(i)^4	0.99085091
erf_1_5_sin_run1.txt	erf(x)	A+B*i	0.99999997
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	0.99999998
exp_1_5_sin_run1.txt	exp(x)	A+B*i	0.99999999
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	0.99999927
FresnelCosine_1_5_sin_run1.txt	FresnelCosine(x)	A+B*i	0.99590926
FresnelCosine_2_5_sin_run1.txt	FresnelCosine(x)	A+B/i	0.91416039
FresnelCosine_3_5_sin_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.96079397
FresnelCosine_4_5_sin_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.93665224
FresnelSine_1_5_sin_run1.txt	FresnelSine(x)	A+B*i	0.94513935

Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_5_sin_run1.txt	FresnelSine(x)	A+B/i	0.95753387
FresnelSine_3_5_sin_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.96059210
FresnelSine_4_5_sin_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.93207444
J0x_1_5_sin_run1.txt	J0(x)	A+B*i	0.99398203
J0x_2_5_sin_run1.txt	J0(x)	A+B/i	0.98015860
J0x_3_5_sin_run1.txt	J0(x)	A+B*sqrt(i)	0.98770791
J0x_4_5_sin_run1.txt	J0(x)	A+B*log(i)^4	0.99876903
J1x_1_5_sin_run1.txt	J1(x)	A+B*i	0.92548818
J1x_2_5_sin_run1.txt	J1(x)	A+B/i	0.98280926
J1x_3_5_sin_run1.txt	J1(x)	A+B*sqrt(i)	0.98474011
J1x_4_5_sin_run1.txt	J1(x)	A+B*log(i)^4	0.99228015
J2x_1_5_sin_run1.txt	J2(x)	A+B*i	0.97947148
J2x_2_5_sin_run1.txt	J2(x)	A+B/i	0.88654361
J2x_3_5_sin_run1.txt	J2(x)	A+B*sqrt(i)	0.97113534
J2x_4_5_sin_run1.txt	J2(x)	A+B*log(i)^4	0.83937476
J3x_1_5_sin_run1.txt	J3(x)	A+B*i	0.97674318
J3x_2_5_sin_run1.txt	J3(x)	A+B/i	0.95991824
J3x_3_5_sin_run1.txt	J3(x)	A+B*sqrt(i)	0.88765646
J3x_4_5_sin_run1.txt	J3(x)	A+B*log(i)^4	0.88743906
J4x_1_5_sin_run1.txt	J4(x)	A+B*i	0.90364065
J4x_2_5_sin_run1.txt	J4(x)	A+B/i	0.99969950
J4x_3_5_sin_run1.txt	J4(x)	A+B*sqrt(i)	0.71223341
J4x_4_5_sin_run1.txt	J4(x)	A+B*log(i)^4	0.85370125
J5x_1_5_sin_run1.txt	J5(x)	A+B*i	0.79657649
J5x_2_5_sin_run1.txt	J5(x)	A+B/i	0.86623923
J5x_3_5_sin_run1.txt	J5(x)	A+B*sqrt(i)	0.74138605
J5x_4_5_sin_run1.txt	J5(x)	A+B*log(i)^4	0.87869570
ln_1_5_sin_run1.txt	ln(x)	A+B*i	0.99934558
ln_2_5_sin_run1.txt	ln(x)	A+B/i	0.99999682
ln_3_5_sin_run1.txt	ln(x)	A+B*sqrt(i)	0.99962808
ln_4_5_sin_run1.txt	ln(x)	A+B*log(i)^4	0.99987230
log10Gamma_1_5_sin_run1.txt	log10Gamma(x)	A+B*i	0.99999513
log10Gamma_2_5_sin_run1.txt	log10Gamma(x)	A+B/i	0.99995369
log10Gamma_3_5_sin_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99998687
log10Gamma_4_5_sin_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999289
log_1_5_sin_run1.txt	log(x)	A+B*i	0.99948201
log_2_5_sin_run1.txt	log(x)	A+B/i	0.99999665
log_3_5_sin_run1.txt	log(x)	A+B*sqrt(i)	0.99996330
log_4_5_sin_run1.txt	log(x)	A+B*log(i)^4	0.99960565
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	0.99957064
sinh_2_5_sin_run1.txt	sinh(x)	A+B/i	0.99999992
sinh_3_5_sin_run1.txt	sinh(x)	A+B*sqrt(i)	0.99998727
sinh_4_5_sin_run1.txt	sinh(x)	A+B*log(i)^4	0.99996934
Si_1_5_sin_run1.txt	Si(x)	A+B*i	0.93678537
Si_2_5_sin_run1.txt	Si(x)	A+B/i	0.98066568

Filename	Function	gx(i,A,B)	Rsqr Adj
`Si_3_5_sin_run1.txt`	`Si(x)`	`A+B*sqrt(i)`	0.98336608
`Si_4_5_sin_run1.txt`	`Si(x)`	`A+B*log(i)^4`	0.96688534
`tanh_1_5_sin_run1.txt`	`tanh(x)`	`A+B*i`	0.99999969
`tanh_2_5_sin_run1.txt`	`tanh(x)`	`A+B/i`	0.99999996
`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`	0.99999912
`tan_1_5_sin_run1.txt`	`tan(x)`	`A+B*i`	0.99999993
`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`	0.99999997
`tinv1_1_5_sin_run1.txt`	`tinv(0.95,x)`	`A+B*i`	0.74250977
`tinv1_2_5_sin_run1.txt`	`tinv(0.95,x)`	`A+B/i`	0.67213639
`tinv1_3_5_sin_run1.txt`	`tinv(0.95,x)`	`A+B*sqrt(i)`	0.79221518
`tinv1_4_5_sin_run1.txt`	`tinv(0.95,x)`	`A+B*log(i)^4`	0.66447497
`tinv2_1_5_sin_run1.txt`	`tinv(0.975,x)`	`A+B*i`	0.60508782
`tinv2_2_5_sin_run1.txt`	`tinv(0.975,x)`	`A+B/i`	0.73162182
`tinv2_3_5_sin_run1.txt`	`tinv(0.975,x)`	`A+B*sqrt(i)`	0.74514141
`tinv2_4_5_sin_run1.txt`	`tinv(0.975,x)`	`A+B*log(i)^4`	0.84825311
`trigamma_1_5_sin_run1.txt`	`trigamma(x)`	`A+B*i`	0.72574389
`trigamma_2_5_sin_run1.txt`	`trigamma(x)`	`A+B/i`	0.61806473
`trigamma_3_5_sin_run1.txt`	`trigamma(x)`	`A+B*sqrt(i)`	0.62118649
`trigamma_4_5_sin_run1.txt`	`trigamma(x)`	`A+B*log(i)^4`	0.59033267

Sine Series of Order 6

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

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

$$+ a_6 * \sin(S_6 * gx(6,A_6,B_6) + Os_6)$$

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

Fourier-Shammas Series Approximations 6 Sine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_6_sin_run1.txt	acosh(x)	A+B*i	0.97660126
acosh_2_6_sin_run1.txt	acosh(x)	A+B/i	0.97689818
acosh_3_6_sin_run1.txt	acosh(x)	A+B*sqrt(i)	0.98276164
acosh_4_6_sin_run1.txt	acosh(x)	A+B*log(i)^4	0.98031432
arccos_1_6_sin_run1.txt	arccos(x)	A+B*i	0.99961237
arccos_2_6_sin_run1.txt	arccos(x)	A+B/i	0.99959596
arccos_3_6_sin_run1.txt	arccos(x)	A+B*sqrt(i)	0.99966393
arccos_4_6_sin_run1.txt	arccos(x)	A+B*log(i)^4	0.99951141
arcsin_1_6_sin_run1.txt	arcsin(x)	A+B*i	0.99961279
arcsin_2_6_sin_run1.txt	arcsin(x)	A+B/i	0.99963547
arcsin_3_6_sin_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99962460
arcsin_4_6_sin_run1.txt	arcsin(x)	A+B*log(i)^4	0.99956336
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	0.98210929
asinh_2_6_sin_run1.txt	asinh(x)	A+B/i	0.97441641
asinh_3_6_sin_run1.txt	asinh(x)	A+B*sqrt(i)	0.96443724
asinh_4_6_sin_run1.txt	asinh(x)	A+B*log(i)^4	0.99506485
atanh_1_6_sin_run1.txt	atanh(x)	A+B*i	0.99416899
atanh_2_6_sin_run1.txt	atanh(x)	A+B/i	0.99403160
atanh_3_6_sin_run1.txt	atanh(x)	A+B*sqrt(i)	0.99442336
atanh_4_6_sin_run1.txt	atanh(x)	A+B*log(i)^4	0.99179495
CI_1_6_sin_run1.txt	Ci(x)	A+B*i	0.81765858
Ci_2_6_sin_run1.txt	Ci(x)	A+B/i	0.98076579
Ci_3_6_sin_run1.txt	Ci(x)	A+B*sqrt(i)	0.97929062
CI_4_6_sin_run1.txt	Ci(x)	A+B*log(i)^4	0.97507973
cosh_1_6_sin_run1.txt	cosh(x)	A+B*i	0.99987419
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)	0.99995524
cosh_4_6_sin_run1.txt	cosh(x)	A+B*log(i)^4	0.99995278
diamma_2_6_sin_run1.txt	digamma(x)	A+B/i	0.97804303
digamma_1_6_sin_run1.txt	digamma(x)	A+B*i	0.98078178
digamma_3_6_sin_run1.txt	digamma(x)	A+B*sqrt(i)	0.98453775
digamma_4_6_sin_run1.txt	digamma(x)	A+B*log(i)^4	0.99790046
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	0.99999995
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	0.93473695
FresnelCosine_2_6_sin_run1.txt	FresnelCosine(x)	A+B/i	0.91655637
FresnelCosine_3_6_sin_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.95781116
FresnelCosine_4_6_sin_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.94444598
FresnelSine_1_6_sin_run1.txt	FresnelSine(x)	A+B*i	0.97016112

Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_6_sin_run1.txt	FresnelSine(x)	A+B/i	0.94072891
FresnelSine_3_6_sin_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.99615471
FresnelSine_4_6_sin_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.89172649
J0x_1_6_sin_run1.txt	J0(x)	A+B*i	0.97962859
J0x_2_6_sin_run1.txt	J0(x)	A+B/i	0.99714992
J0x_3_6_sin_run1.txt	J0(x)	A+B*sqrt(i)	0.99210989
J0x_4_6_sin_run1.txt	J0(x)	A+B*log(i)^4	0.98154079
J1x_1_6_sin_run1.txt	J1(x)	A+B*i	0.96801624
J1x_2_6_sin_run1.txt	J1(x)	A+B/i	0.91398794
J1x_3_6_sin_run1.txt	J1(x)	A+B*sqrt(i)	0.93310613
J1x_4_6_sin_run1.txt	J1(x)	A+B*log(i)^4	0.97537057
J2x_1_6_sin_run1.txt	J2(x)	A+B*i	0.99273582
J2x_2_6_sin_run1.txt	J2(x)	A+B/i	0.99999355
J2x_3_6_sin_run1.txt	J2(x)	A+B*sqrt(i)	0.97105907
J2x_4_6_sin_run1.txt	J2(x)	A+B*log(i)^4	0.99103346
J3x_1_6_sin_run1.txt	J3(x)	A+B*i	0.82299044
J3x_2_6_sin_run1.txt	J3(x)	A+B/i	0.97797536
J3x_3_6_sin_run1.txt	J3(x)	A+B*sqrt(i)	0.94858959
J3x_4_6_sin_run1.txt	J3(x)	A+B*log(i)^4	0.87744082
J4x_1_6_sin_run1.txt	J4(x)	A+B*i	0.99985954
J4x_2_6_sin_run1.txt	J4(x)	A+B/i	0.99984540
J4x_3_6_sin_run1.txt	J4(x)	A+B*sqrt(i)	0.73103797
J4x_4_6_sin_run1.txt	J4(x)	A+B*log(i)^4	0.97693821
J5x_1_6_sin_run1.txt	J5(x)	A+B*i	0.99992430
J5x_2_6_sin_run1.txt	J5(x)	A+B/i	0.99553621
J5x_3_6_sin_run1.txt	J5(x)	A+B*sqrt(i)	0.87385546
J5x_4_6_sin_run1.txt	J5(x)	A+B*log(i)^4	0.99733007
ln_1_6_sin_run1.txt	ln(x)	A+B*i	0.99942754
ln_2_6_sin_run1.txt	ln(x)	A+B/i	0.99999929
ln_3_6_sin_run1.txt	ln(x)	A+B*sqrt(i)	0.99998670
ln_4_6_sin_run1.txt	ln(x)	A+B*log(i)^4	0.99973107
log10Gamma_1_6_sin_run1.txt	log10Gamma(x)	A+B*i	0.99998758
log10Gamma_2_6_sin_run1.txt	log10Gamma(x)	A+B/i	0.99996063
log10Gamma_3_6_sin_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99998667
log10Gamma_4_6_sin_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999473
log_1_6_sin_run1.txt	log(x)	A+B*i	0.99947706
log_2_6_sin_run1.txt	log(x)	A+B/i	0.99999570
log_3_6_sin_run1.txt	log(x)	A+B*sqrt(i)	0.99967944
log_4_6_sin_run1.txt	log(x)	A+B*log(i)^4	0.99979062
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	0.99982425
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)	0.99998886
sinh_4_6_sin_run1.txt	sinh(x)	A+B*log(i)^4	0.99997747
Si_1_6_sin_run1.txt	Si(x)	A+B*i	0.82647623
Si_2_6_sin_run1.txt	Si(x)	A+B/i	0.96471587

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Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_6_sin_run1.txt	Si(x)	A+B*sqrt(i)	0.96153533
Si_4_6_sin_run1.txt	Si(x)	A+B*log(i)^4	0.90277680
tanh_1_6_sin_run1.txt	tanh(x)	A+B*i	0.99999978
tanh_2_6_sin_run1.txt	tanh(x)	A+B/i	0.99999999
tanh_3_6_sin_run1.txt	tanh(x)	A+B*sqrt(i)	0.99999999
tanh_4_6_sin_run1.txt	tanh(x)	A+B*log(i)^4	0.99999941
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
tinv1_1_6_sin_run1.txt	tinv(0.95,x)	A+B*i	0.86557927
tinv1_2_6_sin_run1.txt	tinv(0.95,x)	A+B/i	0.71688138
tinv1_3_6_sin_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.77164638
tinv1_4_6_sin_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.86438644
tinv2_1_6_sin_run1.txt	tinv(0.975,x)	A+B*i	0.64095763
tinv2_2_6_sin_run1.txt	tinv(0.975,x)	A+B/i	0.69496183
tinv2_3_6_sin_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.75807932
tinv2_4_6_sin_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.74371036
trigamma_1_6_sin_run1.txt	trigamma(x)	A+B*i	0.68085565
trigamma_2_6_sin_run1.txt	trigamma(x)	A+B/i	0.67780199
trigamma_3_6_sin_run1.txt	trigamma(x)	A+B*sqrt(i)	0.70466779
trigamma_4_6_sin_run1.txt	trigamma(x)	A+B*log(i)^4	0.73902949

Sine Series of Order 7

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

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

$$+ \; a_7 * \sin(S_7 * gx(7,A_7,B_7) + Os_7)$$

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

Fourier-Shammas Series Approximations 7 Sine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_7_sin_run1.txt	acosh(x)	A+B*i	0.95156484
acosh_2_7_sin_run1.txt	acosh(x)	A+B/i	0.95980651
acosh_3_7_sin_run1.txt	acosh(x)	A+B*sqrt(i)	0.97136832
acosh_4_7_sin_run1.txt	acosh(x)	A+B*log(i)^4	0.99424054
arccos_1_7_sin_run1.txt	arccos(x)	A+B*i	0.99976957
arccos_2_7_sin_run1.txt	arccos(x)	A+B/i	0.99971033
arccos_3_7_sin_run1.txt	arccos(x)	A+B*sqrt(i)	0.99976863
arccos_4_7_sin_run1.txt	arccos(x)	A+B*log(i)^4	0.99967566
arcsin_1_7_sin_run1.txt	arcsin(x)	A+B*i	0.99971346
arcsin_2_7_sin_run1.txt	arcsin(x)	A+B/i	0.99976110
arcsin_3_7_sin_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99976325
arcsin_4_7_sin_run1.txt	arcsin(x)	A+B*log(i)^4	0.99968234
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	0.97786530
asinh_2_7_sin_run1.txt	asinh(x)	A+B/i	0.95151820
asinh_3_7_sin_run1.txt	asinh(x)	A+B*sqrt(i)	0.99209374
asinh_4_7_sin_run1.txt	asinh(x)	A+B*log(i)^4	0.96785397
atanh_1_7_sin_run1.txt	atanh(x)	A+B*i	0.99573353
atanh_2_7_sin_run1.txt	atanh(x)	A+B/i	0.99588285
atanh_3_7_sin_run1.txt	atanh(x)	A+B*sqrt(i)	0.99564195
atanh_4_7_sin_run1.txt	atanh(x)	A+B*log(i)^4	0.99485045
CI_1_7_sin_run1.txt	Ci(x)	A+B*i	0.89248469
Ci_2_7_sin_run1.txt	Ci(x)	A+B/i	0.96529182
Ci_3_7_sin_run1.txt	Ci(x)	A+B*sqrt(i)	0.91365959
CI_4_7_sin_run1.txt	Ci(x)	A+B*log(i)^4	0.96874306
cosh_1_7_sin_run1.txt	cosh(x)	A+B*i	0.99995429
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)	0.99997766
cosh_4_7_sin_run1.txt	cosh(x)	A+B*log(i)^4	0.99997665
diamma_2_7_sin_run1.txt	digamma(x)	A+B/i	0.98768948
digamma_1_7_sin_run1.txt	digamma(x)	A+B*i	0.99494931
digamma_3_7_sin_run1.txt	digamma(x)	A+B*sqrt(i)	0.98845953
digamma_4_7_sin_run1.txt	digamma(x)	A+B*log(i)^4	0.98752629
erf_1_7_sin_run1.txt	erf(x)	A+B*i	0.99999991
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	0.99999997
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	0.99616536
FresnelCosine_2_7_sin_run1.txt	FresnelCosine(x)	A+B/i	0.96622767
FresnelCosine_3_7_sin_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.98065202
FresnelCosine_4_7_sin_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.98633400
FresnelSine_1_7_sin_run1.txt	FresnelSine(x)	A+B*i	0.90377809

Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_7_sin_run1.txt	FresnelSine(x)	A+B/i	0.98039647
FresnelSine_3_7_sin_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.98340056
FresnelSine_4_7_sin_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.99642734
J0x_1_7_sin_run1.txt	J0(x)	A+B*i	0.98892872
J0x_2_7_sin_run1.txt	J0(x)	A+B/i	0.99261580
J0x_3_7_sin_run1.txt	J0(x)	A+B*sqrt(i)	0.97611596
J0x_4_7_sin_run1.txt	J0(x)	A+B*log(i)^4	0.92158668
J1x_1_7_sin_run1.txt	J1(x)	A+B*i	0.97753928
J1x_2_7_sin_run1.txt	J1(x)	A+B/i	0.99997891
J1x_3_7_sin_run1.txt	J1(x)	A+B*sqrt(i)	0.95094821
J1x_4_7_sin_run1.txt	J1(x)	A+B*log(i)^4	0.98800088
J2x_1_7_sin_run1.txt	J2(x)	A+B*i	0.97282932
J2x_2_7_sin_run1.txt	J2(x)	A+B/i	0.99987972
J2x_3_7_sin_run1.txt	J2(x)	A+B*sqrt(i)	0.96553889
J2x_4_7_sin_run1.txt	J2(x)	A+B*log(i)^4	0.98238515
J3x_1_7_sin_run1.txt	J3(x)	A+B*i	0.98052751
J3x_2_7_sin_run1.txt	J3(x)	A+B/i	0.97812899
J3x_3_7_sin_run1.txt	J3(x)	A+B*sqrt(i)	0.86920651
J3x_4_7_sin_run1.txt	J3(x)	A+B*log(i)^4	0.99780121
J4x_1_7_sin_run1.txt	J4(x)	A+B*i	0.90691829
J4x_2_7_sin_run1.txt	J4(x)	A+B/i	0.99997548
J4x_3_7_sin_run1.txt	J4(x)	A+B*sqrt(i)	0.76935813
J4x_4_7_sin_run1.txt	J4(x)	A+B*log(i)^4	0.99993892
J5x_1_7_sin_run1.txt	J5(x)	A+B*i	0.72864330
J5x_2_7_sin_run1.txt	J5(x)	A+B/i	0.99889510
J5x_3_7_sin_run1.txt	J5(x)	A+B*sqrt(i)	0.80387759
J5x_4_7_sin_run1.txt	J5(x)	A+B*log(i)^4	0.91213150
ln_1_7_sin_run1.txt	ln(x)	A+B*i	0.99948238
ln_2_7_sin_run1.txt	ln(x)	A+B/i	0.99999980
ln_3_7_sin_run1.txt	ln(x)	A+B*sqrt(i)	0.99995789
ln_4_7_sin_run1.txt	ln(x)	A+B*log(i)^4	0.99992204
log10Gamma_1_7_sin_run1.txt	log10Gamma(x)	A+B*i	0.99999403
log10Gamma_2_7_sin_run1.txt	log10Gamma(x)	A+B/i	0.99997634
log10Gamma_3_7_sin_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99998658
log10Gamma_4_7_sin_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999940
log_1_7_sin_run1.txt	log(x)	A+B*i	0.99943937
log_2_7_sin_run1.txt	log(x)	A+B/i	0.99999895
log_3_7_sin_run1.txt	log(x)	A+B*sqrt(i)	0.99995268
log_4_7_sin_run1.txt	log(x)	A+B*log(i)^4	0.99983969
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	0.99999647
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)	0.99999538
sinh_4_7_sin_run1.txt	sinh(x)	A+B*log(i)^4	0.99999919
Si_1_7_sin_run1.txt	Si(x)	A+B*i	0.97540730
Si_2_7_sin_run1.txt	Si(x)	A+B/i	0.95166436

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_7_sin_run1.txt	Si(x)	A+B*sqrt(i)	0.97823552
Si_4_7_sin_run1.txt	Si(x)	A+B*log(i)^4	0.98478253
tanh_1_7_sin_run1.txt	tanh(x)	A+B*i	0.99999363
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	0.99999974
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
tinv1_1_7_sin_run1.txt	tinv(0.95,x)	A+B*i	0.82954842
tinv1_2_7_sin_run1.txt	tinv(0.95,x)	A+B/i	0.81525968
tinv1_3_7_sin_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.67580553
tinv1_4_7_sin_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.88070138
tinv2_1_7_sin_run1.txt	tinv(0.975,x)	A+B*i	0.62375699
tinv2_2_7_sin_run1.txt	tinv(0.975,x)	A+B/i	0.71361328
tinv2_3_7_sin_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.69726133
tinv2_4_7_sin_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.80972705
trigamma_1_7_sin_run1.txt	trigamma(x)	A+B*i	0.76893516
trigamma_2_7_sin_run1.txt	trigamma(x)	A+B/i	0.66353844
trigamma_3_7_sin_run1.txt	trigamma(x)	A+B*sqrt(i)	0.65025454
trigamma_4_7_sin_run1.txt	trigamma(x)	A+B*log(i)^4	0.65377415

Cosine Series of Order 3

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

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

$$+ \; a_3 * \cos(C_3 * gx(3,A_3,B_3) + Oc_3)$$

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

Fourier-Shammas Series Approximations 3 Cosine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_3_cos_run1.txt	acosh(x)	A+B*i	0.98477597
acosh_2_3_cos_run1.txt	acosh(x)	A+B/i	0.95414275
acosh_3_3_cos_run1.txt	acosh(x)	A+B*sqrt(i)	0.93424492
acosh_4_3_cos_run1.txt	acosh(x)	A+B*log(i)^4	0.97542086
arccos_1_3_cos_run1.txt	arccos(x)	A+B*i	0.99875367
arccos_2_3_cos_run1.txt	arccos(x)	A+B/i	0.99870915
arccos_3_3_cos_run1.txt	arccos(x)	A+B*sqrt(i)	0.99892756
arccos_4_3_cos_run1.txt	arccos(x)	A+B*log(i)^4	0.99887990
arcsin_1_3_cos_run1.txt	arcsin(x)	A+B*i	0.99866852
arcsin_2_3_cos_run1.txt	arcsin(x)	A+B/i	0.99867283
arcsin_3_3_cos_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99862113
arcsin_4_3_cos_run1.txt	arcsin(x)	A+B*log(i)^4	0.99882340
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	0.96853478
asinh_2_3_cos_run1.txt	asinh(x)	A+B/i	0.94090036
asinh_3_3_cos_run1.txt	asinh(x)	A+B*sqrt(i)	0.92215492
asinh_4_3_cos_run1.txt	asinh(x)	A+B*log(i)^4	0.97085555
atanh_1_3_cos_run1.txt	atanh(x)	A+B*i	0.98327506
atanh_2_3_cos_run1.txt	atanh(x)	A+B/i	0.98035496
atanh_3_3_cos_run1.txt	atanh(x)	A+B*sqrt(i)	0.98374523
atanh_4_3_cos_run1.txt	atanh(x)	A+B*log(i)^4	0.98345630
CI_1_3_cos_run1.txt	Ci(x)	A+B*i	0.84427002
Ci_2_3_cos_run1.txt	Ci(x)	A+B/i	0.92783322
Ci_3_3_cos_run1.txt	Ci(x)	A+B*sqrt(i)	0.93567696
CI_4_3_cos_run1.txt	Ci(x)	A+B*log(i)^4	0.94415081
cosh_1_3_cos_run1.txt	cosh(x)	A+B*i	0.99943352
cosh_2_3_cos_run1.txt	cosh(x)	A+B/i	0.99998540
cosh_3_3_cos_run1.txt	cosh(x)	A+B*sqrt(i)	0.99991748
cosh_4_3_cos_run1.txt	cosh(x)	A+B*log(i)^4	0.99996839
diamma_2_3_cos_run1.txt	digamma(x)	A+B/i	0.96479769
digamma_1_3_cos_run1.txt	digamma(x)	A+B*i	0.99166659
digamma_3_3_cos_run1.txt	digamma(x)	A+B*sqrt(i)	0.94831203
digamma_4_3_cos_run1.txt	digamma(x)	A+B*log(i)^4	0.95332360
erf_1_3_cos_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_3_cos_run1.txt	erf(x)	A+B/i	0.99999997
erf_3_3_cos_run1.txt	erf(x)	A+B*sqrt(i)	0.99999999
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	0.99999993
exp_2_3_cos_run1.txt	exp(x)	A+B/i	0.99999988
exp_3_3_cos_run1.txt	exp(x)	A+B*sqrt(i)	0.99999998
exp_4_3_cos_run1.txt	exp(x)	A+B*log(i)^4	0.99999982
FresnelCosine_1_3_cos_run1.txt	FresnelCosine(x)	A+B*i	0.77309246
FresnelCosine_2_3_cos_run1.txt	FresnelCosine(x)	A+B/i	0.84214025
FresnelCosine_3_3_cos_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.86080357
FresnelCosine_4_3_cos_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.77664493
FresnelSine_1_3_cos_run1.txt	FresnelSine(x)	A+B*i	0.90419112

Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_3_cos_run1.txt	FresnelSine(x)	A+B/i	0.90349318
FresnelSine_3_3_cos_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.87513977
FresnelSine_4_3_cos_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.81673585
J0x_1_3_cos_run1.txt	J0(x)	A+B*i	0.98201900
J0x_2_3_cos_run1.txt	J0(x)	A+B/i	0.98099869
J0x_3_3_cos_run1.txt	J0(x)	A+B*sqrt(i)	0.97885309
J0x_4_3_cos_run1.txt	J0(x)	A+B*log(i)^4	0.99593070
J1x_1_3_cos_run1.txt	J1(x)	A+B*i	0.98374906
J1x_2_3_cos_run1.txt	J1(x)	A+B/i	0.93315994
J1x_3_3_cos_run1.txt	J1(x)	A+B*sqrt(i)	0.75116441
J1x_4_3_cos_run1.txt	J1(x)	A+B*log(i)^4	0.95142825
J2x_1_3_cos_run1.txt	J2(x)	A+B*i	0.93778454
J2x_2_3_cos_run1.txt	J2(x)	A+B/i	0.93221096
J2x_3_3_cos_run1.txt	J2(x)	A+B*sqrt(i)	0.84718986
J2x_4_3_cos_run1.txt	J2(x)	A+B*log(i)^4	0.93010397
J3x_1_3_cos_run1.txt	J3(x)	A+B*i	0.86559368
J3x_2_3_cos_run1.txt	J3(x)	A+B/i	0.93816863
J3x_3_3_cos_run1.txt	J3(x)	A+B*sqrt(i)	0.86675742
J3x_4_3_cos_run1.txt	J3(x)	A+B*log(i)^4	0.94616365
J4x_1_3_cos_run1.txt	J4(x)	A+B*i	0.91361214
J4x_2_3_cos_run1.txt	J4(x)	A+B/i	0.91909313
J4x_3_3_cos_run1.txt	J4(x)	A+B*sqrt(i)	0.78293791
J4x_4_3_cos_run1.txt	J4(x)	A+B*log(i)^4	0.91911017
J5x_1_3_cos_run1.txt	J5(x)	A+B*i	0.92265053
J5x_2_3_cos_run1.txt	J5(x)	A+B/i	0.87398534
J5x_3_3_cos_run1.txt	J5(x)	A+B*sqrt(i)	0.76264927
J5x_4_3_cos_run1.txt	J5(x)	A+B*log(i)^4	0.92272969
ln_1_3_cos_run1.txt	ln(x)	A+B*i	0.99938567
ln_2_3_cos_run1.txt	ln(x)	A+B/i	0.99993619
ln_3_3_cos_run1.txt	ln(x)	A+B*sqrt(i)	0.99993931
ln_4_3_cos_run1.txt	ln(x)	A+B*log(i)^4	0.99983799
log10Gamma_1_3_cos_run1.txt	log10Gamma(x)	A+B*i	0.99998321
log10Gamma_2_3_cos_run1.txt	log10Gamma(x)	A+B/i	0.99996783
log10Gamma_3_3_cos_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99994665
log10Gamma_4_3_cos_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999424
log_1_3_cos_run1.txt	log(x)	A+B*i	0.99921856
log_2_3_cos_run1.txt	log(x)	A+B/i	0.99990539
log_3_3_cos_run1.txt	log(x)	A+B*sqrt(i)	0.99991334
log_4_3_cos_run1.txt	log(x)	A+B*log(i)^4	0.99983587
pwr10_1_3_cos_run1.txt	10^x	A+B*i	0.99999993
pwr10_2_3_cos_run1.txt	10^x	A+B/i	0.99999997
pwr10_3_3_cos_run1.txt	10^x	A+B*sqrt(i)	0.99999994
pwr10_4_3_cos_run1.txt	10^x	A+B*log(i)^4	0.99999983
sinh_1_3_cos_run1.txt	sinh(x)	A+B*i	0.99996715
sinh_2_3_cos_run1.txt	sinh(x)	A+B/i	0.99997625
sinh_3_3_cos_run1.txt	sinh(x)	A+B*sqrt(i)	0.99994928
sinh_4_3_cos_run1.txt	sinh(x)	A+B*log(i)^4	0.99996295
Si_1_3_cos_run1.txt	Si(x)	A+B*i	0.95138050
Si_2_3_cos_run1.txt	Si(x)	A+B/i	0.90210588

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_3_cos_run1.txt	Si(x)	A+B*sqrt(i)	0.97259586
Si_4_3_cos_run1.txt	Si(x)	A+B*log(i)^4	0.90238554
tanh_1_3_cos_run1.txt	tanh(x)	A+B*i	0.99999645
tanh_2_3_cos_run1.txt	tanh(x)	A+B/i	0.99999461
tanh_3_3_cos_run1.txt	tanh(x)	A+B*sqrt(i)	0.99999741
tanh_4_3_cos_run1.txt	tanh(x)	A+B*log(i)^4	0.99999643
tan_1_3_cos_run1.txt	tan(x)	A+B*i	0.99999634
tan_2_3_cos_run1.txt	tan(x)	A+B/i	0.99999912
tan_3_3_cos_run1.txt	tan(x)	A+B*sqrt(i)	0.99999848
tan_4_3_cos_run1.txt	tan(x)	A+B*log(i)^4	0.99999747
tinv1_1_3_cos_run1.txt	tinv(0.95,x)	A+B*i	0.54129465
tinv1_2_3_cos_run1.txt	tinv(0.95,x)	A+B/i	0.55841701
tinv1_3_3_cos_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.55132140
tinv1_4_3_cos_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.57975340
tinv2_1_3_cos_run1.txt	tinv(0.975,x)	A+B*i	0.50900736
tinv2_2_3_cos_run1.txt	tinv(0.975,x)	A+B/i	0.59950729
tinv2_3_3_cos_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.50691874
tinv2_4_3_cos_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.69554553
trigamma_1_3_cos_run1.txt	trigamma(x)	A+B*i	0.63491706
trigamma_2_3_cos_run1.txt	trigamma(x)	A+B/i	0.53415188
trigamma_3_3_cos_run1.txt	trigamma(x)	A+B*sqrt(i)	0.40640401
trigamma_4_3_cos_run1.txt	trigamma(x)	A+B*log(i)^4	0.58789190

Cosine Series of Order 4

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

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

$$+ \ a_4 * \cos(C_4 * gx(4,A_4,B_4) + Oc_4)$$

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

Fourier-Shammas Series Approximations 4 Cosine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_4_cos_run1.txt	acosh(x)	A+B*i	0.97200855
acosh_2_4_cos_run1.txt	acosh(x)	A+B/i	0.96516386
acosh_3_4_cos_run1.txt	acosh(x)	A+B*sqrt(i)	0.98411753
acosh_4_4_cos_run1.txt	acosh(x)	A+B*log(i)^4	0.98076104
arccos_1_4_cos_run1.txt	arccos(x)	A+B*i	0.99929879
arccos_2_4_cos_run1.txt	arccos(x)	A+B/i	0.99933238
arccos_3_4_cos_run1.txt	arccos(x)	A+B*sqrt(i)	0.99921396
arccos_4_4_cos_run1.txt	arccos(x)	A+B*log(i)^4	0.99925463
arcsin_1_4_cos_run1.txt	arcsin(x)	A+B*i	0.99930590
arcsin_2_4_cos_run1.txt	arcsin(x)	A+B/i	0.99931647
arcsin_3_4_cos_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99922315
arcsin_4_4_cos_run1.txt	arcsin(x)	A+B*log(i)^4	0.99930612
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	0.96957844
asinh_2_4_cos_run1.txt	asinh(x)	A+B/i	0.94603666
asinh_3_4_cos_run1.txt	asinh(x)	A+B*sqrt(i)	0.98102372
asinh_4_4_cos_run1.txt	asinh(x)	A+B*log(i)^4	0.98597275
atanh_1_4_cos_run1.txt	atanh(x)	A+B*i	0.98690742
atanh_2_4_cos_run1.txt	atanh(x)	A+B/i	0.98877804
atanh_3_4_cos_run1.txt	atanh(x)	A+B*sqrt(i)	0.98753759
atanh_4_4_cos_run1.txt	atanh(x)	A+B*log(i)^4	0.98741417
CI_1_4_cos_run1.txt	Ci(x)	A+B*i	0.83235137
Ci_2_4_cos_run1.txt	Ci(x)	A+B/i	0.93824438
Ci_3_4_cos_run1.txt	Ci(x)	A+B*sqrt(i)	0.94006242
CI_4_4_cos_run1.txt	Ci(x)	A+B*log(i)^4	0.95871115
cosh_1_4_cos_run1.txt	cosh(x)	A+B*i	0.99993459
cosh_2_4_cos_run1.txt	cosh(x)	A+B/i	0.99999913
cosh_3_4_cos_run1.txt	cosh(x)	A+B*sqrt(i)	0.99993918
cosh_4_4_cos_run1.txt	cosh(x)	A+B*log(i)^4	0.99996876
diamma_2_4_cos_run1.txt	digamma(x)	A+B/i	0.96716687
digamma_1_4_cos_run1.txt	digamma(x)	A+B*i	0.99689436
digamma_3_4_cos_run1.txt	digamma(x)	A+B*sqrt(i)	0.99238440
digamma_4_4_cos_run1.txt	digamma(x)	A+B*log(i)^4	0.99273416
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	0.99999999
FresnelCosine_1_4_cos_run1.txt	FresnelCosine(x)	A+B*i	0.93812718
FresnelCosine_2_4_cos_run1.txt	FresnelCosine(x)	A+B/i	0.89764915
FresnelCosine_3_4_cos_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.93669058
FresnelCosine_4_4_cos_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.89103463
FresnelSine_1_4_cos_run1.txt	FresnelSine(x)	A+B*i	0.93666236

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Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_4_cos_run1.txt	FresnelSine(x)	A+B/i	0.95293932
FresnelSine_3_4_cos_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.89958275
FresnelSine_4_4_cos_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.92977539
J0x_1_4_cos_run1.txt	J0(x)	A+B*i	0.95434963
J0x_2_4_cos_run1.txt	J0(x)	A+B/i	0.97735345
J0x_3_4_cos_run1.txt	J0(x)	A+B*sqrt(i)	0.97058167
J0x_4_4_cos_run1.txt	J0(x)	A+B*log(i)^4	0.96059042
J1x_1_4_cos_run1.txt	J1(x)	A+B*i	0.99533128
J1x_2_4_cos_run1.txt	J1(x)	A+B/i	0.93420116
J1x_3_4_cos_run1.txt	J1(x)	A+B*sqrt(i)	0.93740444
J1x_4_4_cos_run1.txt	J1(x)	A+B*log(i)^4	0.99575133
J2x_1_4_cos_run1.txt	J2(x)	A+B*i	0.84667783
J2x_2_4_cos_run1.txt	J2(x)	A+B/i	0.89443390
J2x_3_4_cos_run1.txt	J2(x)	A+B*sqrt(i)	0.93409241
J2x_4_4_cos_run1.txt	J2(x)	A+B*log(i)^4	0.97540949
J3x_1_4_cos_run1.txt	J3(x)	A+B*i	0.94877667
J3x_2_4_cos_run1.txt	J3(x)	A+B/i	0.97573277
J3x_3_4_cos_run1.txt	J3(x)	A+B*sqrt(i)	0.66589889
J3x_4_4_cos_run1.txt	J3(x)	A+B*log(i)^4	0.85570122
J4x_1_4_cos_run1.txt	J4(x)	A+B*i	0.91599686
J4x_2_4_cos_run1.txt	J4(x)	A+B/i	0.98153589
J4x_3_4_cos_run1.txt	J4(x)	A+B*sqrt(i)	0.96678405
J4x_4_4_cos_run1.txt	J4(x)	A+B*log(i)^4	0.91880120
J5x_1_4_cos_run1.txt	J5(x)	A+B*i	0.95682964
J5x_2_4_cos_run1.txt	J5(x)	A+B/i	0.99161075
J5x_3_4_cos_run1.txt	J5(x)	A+B*sqrt(i)	0.88638308
J5x_4_4_cos_run1.txt	J5(x)	A+B*log(i)^4	0.72743238
ln_1_4_cos_run1.txt	ln(x)	A+B*i	0.99929376
ln_2_4_cos_run1.txt	ln(x)	A+B/i	0.99998631
ln_3_4_cos_run1.txt	ln(x)	A+B*sqrt(i)	0.99995903
ln_4_4_cos_run1.txt	ln(x)	A+B*log(i)^4	0.99974303
log10Gamma_1_4_cos_run1.txt	log10Gamma(x)	A+B*i	0.99998475
log10Gamma_2_4_cos_run1.txt	log10Gamma(x)	A+B/i	0.99995311
log10Gamma_3_4_cos_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99994659
log10Gamma_4_4_cos_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999734
log_1_4_cos_run1.txt	log(x)	A+B*i	0.99943136
log_2_4_cos_run1.txt	log(x)	A+B/i	0.99998486
log_3_4_cos_run1.txt	log(x)	A+B*sqrt(i)	0.99953915
log_4_4_cos_run1.txt	log(x)	A+B*log(i)^4	0.99982676
pwr10_1_4_cos_run1.txt	10^x	A+B*i	1.00000000
pwr10_2_4_cos_run1.txt	10^x	A+B/i	0.99999999
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	0.99999999
sinh_1_4_cos_run1.txt	sinh(x)	A+B*i	0.99949444
sinh_2_4_cos_run1.txt	sinh(x)	A+B/i	0.99999878
sinh_3_4_cos_run1.txt	sinh(x)	A+B*sqrt(i)	0.99994002
sinh_4_4_cos_run1.txt	sinh(x)	A+B*log(i)^4	0.99997383
Si_1_4_cos_run1.txt	Si(x)	A+B*i	0.91477903
Si_2_4_cos_run1.txt	Si(x)	A+B/i	0.90326169

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_4_cos_run1.txt	Si(x)	A+B*sqrt(i)	0.85986076
Si_4_4_cos_run1.txt	Si(x)	A+B*log(i)^4	0.97070341
tanh_1_4_cos_run1.txt	tanh(x)	A+B*i	0.99999984
tanh_2_4_cos_run1.txt	tanh(x)	A+B/i	0.99999968
tanh_3_4_cos_run1.txt	tanh(x)	A+B*sqrt(i)	0.99999896
tanh_4_4_cos_run1.txt	tanh(x)	A+B*log(i)^4	0.99999624
tan_1_4_cos_run1.txt	tan(x)	A+B*i	0.99999991
tan_2_4_cos_run1.txt	tan(x)	A+B/i	0.99999966
tan_3_4_cos_run1.txt	tan(x)	A+B*sqrt(i)	0.99999999
tan_4_4_cos_run1.txt	tan(x)	A+B*log(i)^4	0.99999972
tinv1_1_4_cos_run1.txt	tinv(0.95,x)	A+B*i	0.87015927
tinv1_2_4_cos_run1.txt	tinv(0.95,x)	A+B/i	0.55691273
tinv1_3_4_cos_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.78796069
tinv1_4_4_cos_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.77825826
tinv2_1_4_cos_run1.txt	tinv(0.975,x)	A+B*i	0.75061148
tinv2_2_4_cos_run1.txt	tinv(0.975,x)	A+B/i	0.72039887
tinv2_3_4_cos_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.73182294
tinv2_4_4_cos_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.85939090
trigamma_1_4_cos_run1.txt	trigamma(x)	A+B*i	0.61831580
trigamma_2_4_cos_run1.txt	trigamma(x)	A+B/i	0.62464234
trigamma_3_4_cos_run1.txt	trigamma(x)	A+B*sqrt(i)	0.63471772
trigamma_4_4_cos_run1.txt	trigamma(x)	A+B*log(i)^4	0.58442960

Cosine Series of Order 5

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

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

$$+ \; a_5 * \cos(C_5 * gx(5,A_5,B_5) + Oc_5)$$

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

Fourier-Shammas Series Approximations 5 Cosine

Filename	*Function*	*gx(i,A,B)*	*Rsqr Adj*
`acosh_1_5_cos_run1.txt`	`acosh(x)`	`A+B*i`	0.99454159
`acosh_2_5_cos_run1.txt`	`acosh(x)`	`A+B/i`	0.94350766
`acosh_3_5_cos_run1.txt`	`acosh(x)`	`A+B*sqrt(i)`	0.97829276
`acosh_4_5_cos_run1.txt`	`acosh(x)`	`A+B*log(i)^4`	0.97830170
`arccos_1_5_cos_run1.txt`	`arccos(x)`	`A+B*i`	0.99953585
`arccos_2_5_cos_run1.txt`	`arccos(x)`	`A+B/i`	0.99948914
`arccos_3_5_cos_run1.txt`	`arccos(x)`	`A+B*sqrt(i)`	0.99948546
`arccos_4_5_cos_run1.txt`	`arccos(x)`	`A+B*log(i)^4`	0.99947171
`arcsin_1_5_cos_run1.txt`	`arcsin(x)`	`A+B*i`	0.99949173
`arcsin_2_5_cos_run1.txt`	`arcsin(x)`	`A+B/i`	0.99953126
`arcsin_3_5_cos_run1.txt`	`arcsin(x)`	`A+B*sqrt(i)`	0.99951653
`arcsin_4_5_cos_run1.txt`	`arcsin(x)`	`A+B*log(i)^4`	0.99955397
`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`	0.98475184
`asinh_2_5_cos_run1.txt`	`asinh(x)`	`A+B/i`	0.95375624
`asinh_3_5_cos_run1.txt`	`asinh(x)`	`A+B*sqrt(i)`	0.98039563
`asinh_4_5_cos_run1.txt`	`asinh(x)`	`A+B*log(i)^4`	0.98012054
`atanh_1_5_cos_run1.txt`	`atanh(x)`	`A+B*i`	0.99289911
`atanh_2_5_cos_run1.txt`	`atanh(x)`	`A+B/i`	0.99217868
`atanh_3_5_cos_run1.txt`	`atanh(x)`	`A+B*sqrt(i)`	0.99250286
`atanh_4_5_cos_run1.txt`	`atanh(x)`	`A+B*log(i)^4`	0.99211795
`CI_1_5_cos_run1.txt`	`Ci(x)`	`A+B*i`	0.92861240
`Ci_2_5_cos_run1.txt`	`Ci(x)`	`A+B/i`	0.95176111
`Ci_3_5_cos_run1.txt`	`Ci(x)`	`A+B*sqrt(i)`	0.91796041
`CI_4_5_cos_run1.txt`	`Ci(x)`	`A+B*log(i)^4`	0.91008578
`cosh_1_5_cos_run1.txt`	`cosh(x)`	`A+B*i`	0.99996487
`cosh_2_5_cos_run1.txt`	`cosh(x)`	`A+B/i`	0.99999987
`cosh_3_5_cos_run1.txt`	`cosh(x)`	`A+B*sqrt(i)`	0.99999687
`cosh_4_5_cos_run1.txt`	`cosh(x)`	`A+B*log(i)^4`	0.99996930
`diamma_2_5_cos_run1.txt`	`digamma(x)`	`A+B/i`	0.95517541
`digamma_1_5_cos_run1.txt`	`digamma(x)`	`A+B*i`	0.98518260
`digamma_3_5_cos_run1.txt`	`digamma(x)`	`A+B*sqrt(i)`	0.98313984
`digamma_4_5_cos_run1.txt`	`digamma(x)`	`A+B*log(i)^4`	0.99431252
`erf_1_5_cos_run1.txt`	`erf(x)`	`A+B*i`	0.99999999
`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`	0.99999993
`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`	0.99999998
`FresnelCosine_1_5_cos_run1.txt`	`FresnelCosine(x)`	`A+B*i`	0.99617326
`FresnelCosine_2_5_cos_run1.txt`	`FresnelCosine(x)`	`A+B/i`	0.91490474
`FresnelCosine_3_5_cos_run1.txt`	`FresnelCosine(x)`	`A+B*sqrt(i)`	0.99473767
`FresnelCosine_4_5_cos_run1.txt`	`FresnelCosine(x)`	`A+B*log(i)^4`	0.93550656
`FresnelSine_1_5_cos_run1.txt`	`FresnelSine(x)`	`A+B*i`	0.97077118

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Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_5_cos_run1.txt	FresnelSine(x)	A+B/i	0.96340714
FresnelSine_3_5_cos_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.90733507
FresnelSine_4_5_cos_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.90631983
J0x_1_5_cos_run1.txt	J0(x)	A+B*i	0.98747186
J0x_2_5_cos_run1.txt	J0(x)	A+B/i	0.98995477
J0x_3_5_cos_run1.txt	J0(x)	A+B*sqrt(i)	0.99589339
J0x_4_5_cos_run1.txt	J0(x)	A+B*log(i)^4	0.99474622
J1x_1_5_cos_run1.txt	J1(x)	A+B*i	0.99381180
J1x_2_5_cos_run1.txt	J1(x)	A+B/i	0.99397518
J1x_3_5_cos_run1.txt	J1(x)	A+B*sqrt(i)	0.93755200
J1x_4_5_cos_run1.txt	J1(x)	A+B*log(i)^4	0.98794695
J2x_1_5_cos_run1.txt	J2(x)	A+B*i	0.86340183
J2x_2_5_cos_run1.txt	J2(x)	A+B/i	0.97100167
J2x_3_5_cos_run1.txt	J2(x)	A+B*sqrt(i)	0.76198836
J2x_4_5_cos_run1.txt	J2(x)	A+B*log(i)^4	0.83816016
J3x_1_5_cos_run1.txt	J3(x)	A+B*i	0.93601614
J3x_2_5_cos_run1.txt	J3(x)	A+B/i	0.99932776
J3x_3_5_cos_run1.txt	J3(x)	A+B*sqrt(i)	0.75737315
J3x_4_5_cos_run1.txt	J3(x)	A+B*log(i)^4	0.97663441
J4x_1_5_cos_run1.txt	J4(x)	A+B*i	0.98011434
J4x_2_5_cos_run1.txt	J4(x)	A+B/i	0.99987265
J4x_3_5_cos_run1.txt	J4(x)	A+B*sqrt(i)	0.91319197
J4x_4_5_cos_run1.txt	J4(x)	A+B*log(i)^4	0.99370330
J5x_1_5_cos_run1.txt	J5(x)	A+B*i	0.91448550
J5x_2_5_cos_run1.txt	J5(x)	A+B/i	0.99992433
J5x_3_5_cos_run1.txt	J5(x)	A+B*sqrt(i)	0.97199525
J5x_4_5_cos_run1.txt	J5(x)	A+B*log(i)^4	0.92057940
ln_1_5_cos_run1.txt	ln(x)	A+B*i	0.99947473
ln_2_5_cos_run1.txt	ln(x)	A+B/i	0.99999691
ln_3_5_cos_run1.txt	ln(x)	A+B*sqrt(i)	0.99991331
ln_4_5_cos_run1.txt	ln(x)	A+B*log(i)^4	0.99962327
log10Gamma_1_5_cos_run1.txt	log10Gamma(x)	A+B*i	0.99999925
log10Gamma_2_5_cos_run1.txt	log10Gamma(x)	A+B/i	0.99998058
log10Gamma_3_5_cos_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999196
log10Gamma_4_5_cos_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99998126
log_1_5_cos_run1.txt	log(x)	A+B*i	0.99937620
log_2_5_cos_run1.txt	log(x)	A+B/i	0.99999639
log_3_5_cos_run1.txt	log(x)	A+B*sqrt(i)	0.99999329
log_4_5_cos_run1.txt	log(x)	A+B*log(i)^4	0.99982766
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	0.99995039
sinh_2_5_cos_run1.txt	sinh(x)	A+B/i	0.99999994
sinh_3_5_cos_run1.txt	sinh(x)	A+B*sqrt(i)	0.99999586
sinh_4_5_cos_run1.txt	sinh(x)	A+B*log(i)^4	0.99974904
Si_1_5_cos_run1.txt	Si(x)	A+B*i	0.94511705
Si_2_5_cos_run1.txt	Si(x)	A+B/i	0.97261463

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_5_cos_run1.txt	Si(x)	A+B*sqrt(i)	0.96757647
Si_4_5_cos_run1.txt	Si(x)	A+B*log(i)^4	0.97373759
tanh_1_5_cos_run1.txt	tanh(x)	A+B*i	0.99999996
tanh_2_5_cos_run1.txt	tanh(x)	A+B/i	0.99999998
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	0.99999774
tan_1_5_cos_run1.txt	tan(x)	A+B*i	0.99999999
tan_2_5_cos_run1.txt	tan(x)	A+B/i	0.99999998
tan_3_5_cos_run1.txt	tan(x)	A+B*sqrt(i)	0.99999998
tan_4_5_cos_run1.txt	tan(x)	A+B*log(i)^4	0.99999999
tinv1_1_5_cos_run1.txt	tinv(0.95,x)	A+B*i	0.75484043
tinv1_2_5_cos_run1.txt	tinv(0.95,x)	A+B/i	0.78757801
tinv1_3_5_cos_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.77714281
tinv1_4_5_cos_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.75014807
tinv2_1_5_cos_run1.txt	tinv(0.975,x)	A+B*i	0.84791083
tinv2_2_5_cos_run1.txt	tinv(0.975,x)	A+B/i	0.69419610
tinv2_3_5_cos_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.71976313
tinv2_4_5_cos_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.85601967
trigamma_1_5_cos_run1.txt	trigamma(x)	A+B*i	0.63713048
trigamma_2_5_cos_run1.txt	trigamma(x)	A+B/i	0.58054888
trigamma_3_5_cos_run1.txt	trigamma(x)	A+B*sqrt(i)	0.53336721
trigamma_4_5_cos_run1.txt	trigamma(x)	A+B*log(i)^4	0.73053543

Cosine Series of Order 6

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

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

$$+ \ a_6 * \cos(C_6 * gx(6,A_6,B_6) + Oc_6)$$

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

Fourier-Shammas Series Approximations 6 Cosine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_6_cos_run1.txt	acosh(x)	A+B*i	0.98196669
acosh_2_6_cos_run1.txt	acosh(x)	A+B/i	0.94747971
acosh_3_6_cos_run1.txt	acosh(x)	A+B*sqrt(i)	0.99239167
acosh_4_6_cos_run1.txt	acosh(x)	A+B*log(i)^4	0.99402790
arccos_1_6_cos_run1.txt	arccos(x)	A+B*i	0.99959755
arccos_2_6_cos_run1.txt	arccos(x)	A+B/i	0.99965926
arccos_3_6_cos_run1.txt	arccos(x)	A+B*sqrt(i)	0.99962476
arccos_4_6_cos_run1.txt	arccos(x)	A+B*log(i)^4	0.99962023
arcsin_1_6_cos_run1.txt	arcsin(x)	A+B*i	0.99962700
arcsin_2_6_cos_run1.txt	arcsin(x)	A+B/i	0.99956710
arcsin_3_6_cos_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99961436
arcsin_4_6_cos_run1.txt	arcsin(x)	A+B*log(i)^4	0.99960898
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	0.99229205
asinh_2_6_cos_run1.txt	asinh(x)	A+B/i	0.94938161
asinh_3_6_cos_run1.txt	asinh(x)	A+B*sqrt(i)	0.96612425
asinh_4_6_cos_run1.txt	asinh(x)	A+B*log(i)^4	0.99268415
atanh_1_6_cos_run1.txt	atanh(x)	A+B*i	0.99414345
atanh_2_6_cos_run1.txt	atanh(x)	A+B/i	0.99426625
atanh_3_6_cos_run1.txt	atanh(x)	A+B*sqrt(i)	0.99439104
atanh_4_6_cos_run1.txt	atanh(x)	A+B*log(i)^4	0.99500084
CI_1_6_cos_run1.txt	Ci(x)	A+B*i	0.88121790
Ci_2_6_cos_run1.txt	Ci(x)	A+B/i	0.96215042
Ci_3_6_cos_run1.txt	Ci(x)	A+B*sqrt(i)	0.86602332
CI_4_6_cos_run1.txt	Ci(x)	A+B*log(i)^4	0.95564463
cosh_1_6_cos_run1.txt	cosh(x)	A+B*i	0.99934587
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)	0.99999572
cosh_4_6_cos_run1.txt	cosh(x)	A+B*log(i)^4	0.99996491
diamma_2_6_cos_run1.txt	digamma(x)	A+B/i	0.95901449
digamma_1_6_cos_run1.txt	digamma(x)	A+B*i	0.98855239
digamma_3_6_cos_run1.txt	digamma(x)	A+B*sqrt(i)	0.99537181
digamma_4_6_cos_run1.txt	digamma(x)	A+B*log(i)^4	0.99295890
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	0.99999998
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	0.96941776
FresnelCosine_2_6_cos_run1.txt	FresnelCosine(x)	A+B/i	0.99233523
FresnelCosine_3_6_cos_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.95946549
FresnelCosine_4_6_cos_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.87220541
FresnelSine_1_6_cos_run1.txt	FresnelSine(x)	A+B*i	0.96684325

Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_6_cos_run1.txt	FresnelSine(x)	A+B/i	0.95397054
FresnelSine_3_6_cos_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.98595878
FresnelSine_4_6_cos_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.93133915
J0x_1_6_cos_run1.txt	J0(x)	A+B*i	0.99469307
J0x_2_6_cos_run1.txt	J0(x)	A+B/i	0.97445312
J0x_3_6_cos_run1.txt	J0(x)	A+B*sqrt(i)	0.96126306
J0x_4_6_cos_run1.txt	J0(x)	A+B*log(i)^4	0.99373976
J1x_1_6_cos_run1.txt	J1(x)	A+B*i	0.99997023
J1x_2_6_cos_run1.txt	J1(x)	A+B/i	0.95626952
J1x_3_6_cos_run1.txt	J1(x)	A+B*sqrt(i)	0.99348918
J1x_4_6_cos_run1.txt	J1(x)	A+B*log(i)^4	0.97641317
J2x_1_6_cos_run1.txt	J2(x)	A+B*i	0.97496379
J2x_2_6_cos_run1.txt	J2(x)	A+B/i	0.98948197
J2x_3_6_cos_run1.txt	J2(x)	A+B*sqrt(i)	0.91265863
J2x_4_6_cos_run1.txt	J2(x)	A+B*log(i)^4	0.90435712
J3x_1_6_cos_run1.txt	J3(x)	A+B*i	0.70988693
J3x_2_6_cos_run1.txt	J3(x)	A+B/i	0.99996569
J3x_3_6_cos_run1.txt	J3(x)	A+B*sqrt(i)	0.99469059
J3x_4_6_cos_run1.txt	J3(x)	A+B*log(i)^4	0.99992552
J4x_1_6_cos_run1.txt	J4(x)	A+B*i	0.89912107
J4x_2_6_cos_run1.txt	J4(x)	A+B/i	0.99525605
J4x_3_6_cos_run1.txt	J4(x)	A+B*sqrt(i)	0.99901047
J4x_4_6_cos_run1.txt	J4(x)	A+B*log(i)^4	0.98014438
J5x_1_6_cos_run1.txt	J5(x)	A+B*i	0.72581885
J5x_2_6_cos_run1.txt	J5(x)	A+B/i	0.99733157
J5x_3_6_cos_run1.txt	J5(x)	A+B*sqrt(i)	0.97446406
J5x_4_6_cos_run1.txt	J5(x)	A+B*log(i)^4	0.99949741
ln_1_6_cos_run1.txt	ln(x)	A+B*i	0.99922088
ln_2_6_cos_run1.txt	ln(x)	A+B/i	0.99999921
ln_3_6_cos_run1.txt	ln(x)	A+B*sqrt(i)	0.99938604
ln_4_6_cos_run1.txt	ln(x)	A+B*log(i)^4	0.99967057
log10Gamma_1_6_cos_run1.txt	log10Gamma(x)	A+B*i	0.99998549
log10Gamma_2_6_cos_run1.txt	log10Gamma(x)	A+B/i	0.99998138
log10Gamma_3_6_cos_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999001
log10Gamma_4_6_cos_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999950
log_1_6_cos_run1.txt	log(x)	A+B*i	0.99931067
log_2_6_cos_run1.txt	log(x)	A+B/i	0.99999923
log_3_6_cos_run1.txt	log(x)	A+B*sqrt(i)	0.99937140
log_4_6_cos_run1.txt	log(x)	A+B*log(i)^4	0.99983825
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	0.99995663
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)	0.99999698
sinh_4_6_cos_run1.txt	sinh(x)	A+B*log(i)^4	0.99997129
Si_1_6_cos_run1.txt	Si(x)	A+B*i	0.93931887
Si_2_6_cos_run1.txt	Si(x)	A+B/i	0.98994274

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_6_cos_run1.txt	Si(x)	A+B*sqrt(i)	0.95889243
Si_4_6_cos_run1.txt	Si(x)	A+B*log(i)^4	0.99264127
tanh_1_6_cos_run1.txt	tanh(x)	A+B*i	0.99999733
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	0.99999968
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	0.99999999
tinv1_1_6_cos_run1.txt	tinv(0.95,x)	A+B*i	0.79929646
tinv1_2_6_cos_run1.txt	tinv(0.95,x)	A+B/i	0.72576999
tinv1_3_6_cos_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.74286213
tinv1_4_6_cos_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.73366408
tinv2_1_6_cos_run1.txt	tinv(0.975,x)	A+B*i	0.81249344
tinv2_2_6_cos_run1.txt	tinv(0.975,x)	A+B/i	0.78727049
tinv2_3_6_cos_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.75537321
tinv2_4_6_cos_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.73994027
trigamma_1_6_cos_run1.txt	trigamma(x)	A+B*i	0.44357956
trigamma_2_6_cos_run1.txt	trigamma(x)	A+B/i	0.57565204
trigamma_3_6_cos_run1.txt	trigamma(x)	A+B*sqrt(i)	0.61477860
trigamma_4_6_cos_run1.txt	trigamma(x)	A+B*log(i)^4	0.74029162

Cosine Series of Order 7

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

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

$$+ a_7 * \cos(C_7 * gx(7,A_7,B_7) + Oc_7)$$

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

Fourier-Shammas Series Approximations 7 Cosine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_7_cos_run1.txt	acosh(x)	A+B*i	0.98196338
acosh_2_7_cos_run1.txt	acosh(x)	A+B/i	0.97457135
acosh_3_7_cos_run1.txt	acosh(x)	A+B*sqrt(i)	0.98900394
acosh_4_7_cos_run1.txt	acosh(x)	A+B*log(i)^4	0.98745533
arccos_1_7_cos_run1.txt	arccos(x)	A+B*i	0.99973413
arccos_2_7_cos_run1.txt	arccos(x)	A+B/i	0.99974687
arccos_3_7_cos_run1.txt	arccos(x)	A+B*sqrt(i)	0.99974380
arccos_4_7_cos_run1.txt	arccos(x)	A+B*log(i)^4	0.99961898
arcsin_1_7_cos_run1.txt	arcsin(x)	A+B*i	0.99974108
arcsin_2_7_cos_run1.txt	arcsin(x)	A+B/i	0.99974420
arcsin_3_7_cos_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99971532
arcsin_4_7_cos_run1.txt	arcsin(x)	A+B*log(i)^4	0.99964198
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	0.98650608
asinh_2_7_cos_run1.txt	asinh(x)	A+B/i	0.94934046
asinh_3_7_cos_run1.txt	asinh(x)	A+B*sqrt(i)	0.99329685
asinh_4_7_cos_run1.txt	asinh(x)	A+B*log(i)^4	0.99328928
atanh_1_7_cos_run1.txt	atanh(x)	A+B*i	0.99432016
atanh_2_7_cos_run1.txt	atanh(x)	A+B/i	0.99571249
atanh_3_7_cos_run1.txt	atanh(x)	A+B*sqrt(i)	0.99591709
atanh_4_7_cos_run1.txt	atanh(x)	A+B*log(i)^4	0.99423873
CI_1_7_cos_run1.txt	Ci(x)	A+B*i	0.93607240
Ci_2_7_cos_run1.txt	Ci(x)	A+B/i	0.94885846
Ci_3_7_cos_run1.txt	Ci(x)	A+B*sqrt(i)	0.90972732
CI_4_7_cos_run1.txt	Ci(x)	A+B*log(i)^4	0.97965724
cosh_1_7_cos_run1.txt	cosh(x)	A+B*i	0.99999206
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)	0.99999469
cosh_4_7_cos_run1.txt	cosh(x)	A+B*log(i)^4	0.99999895
diamma_2_7_cos_run1.txt	digamma(x)	A+B/i	0.96541576
digamma_1_7_cos_run1.txt	digamma(x)	A+B*i	0.99005507
digamma_3_7_cos_run1.txt	digamma(x)	A+B*sqrt(i)	0.99318663
digamma_4_7_cos_run1.txt	digamma(x)	A+B*log(i)^4	0.99947098
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	0.93721223
FresnelCosine_2_7_cos_run1.txt	FresnelCosine(x)	A+B/i	0.97461515
FresnelCosine_3_7_cos_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.97446869
FresnelCosine_4_7_cos_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.99757122
FresnelSine_1_7_cos_run1.txt	FresnelSine(x)	A+B*i	0.97257049

Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_7_cos_run1.txt	FresnelSine(x)	A+B/i	0.98645047
FresnelSine_3_7_cos_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.98099303
FresnelSine_4_7_cos_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.93063588
J0x_1_7_cos_run1.txt	J0(x)	A+B*i	0.98687429
J0x_2_7_cos_run1.txt	J0(x)	A+B/i	0.99313343
J0x_3_7_cos_run1.txt	J0(x)	A+B*sqrt(i)	0.99788701
J0x_4_7_cos_run1.txt	J0(x)	A+B*log(i)^4	0.99045551
J1x_1_7_cos_run1.txt	J1(x)	A+B*i	0.99675945
J1x_2_7_cos_run1.txt	J1(x)	A+B/i	0.99991136
J1x_3_7_cos_run1.txt	J1(x)	A+B*sqrt(i)	0.95664414
J1x_4_7_cos_run1.txt	J1(x)	A+B*log(i)^4	0.99491539
J2x_1_7_cos_run1.txt	J2(x)	A+B*i	0.95268902
J2x_2_7_cos_run1.txt	J2(x)	A+B/i	0.99998303
J2x_3_7_cos_run1.txt	J2(x)	A+B*sqrt(i)	0.99999566
J2x_4_7_cos_run1.txt	J2(x)	A+B*log(i)^4	0.96587918
J3x_1_7_cos_run1.txt	J3(x)	A+B*i	0.98305113
J3x_2_7_cos_run1.txt	J3(x)	A+B/i	0.99862404
J3x_3_7_cos_run1.txt	J3(x)	A+B*sqrt(i)	0.85964029
J3x_4_7_cos_run1.txt	J3(x)	A+B*log(i)^4	0.93516520
J4x_1_7_cos_run1.txt	J4(x)	A+B*i	0.95991654
J4x_2_7_cos_run1.txt	J4(x)	A+B/i	0.99924325
J4x_3_7_cos_run1.txt	J4(x)	A+B*sqrt(i)	0.99989403
J4x_4_7_cos_run1.txt	J4(x)	A+B*log(i)^4	0.98081325
J5x_1_7_cos_run1.txt	J5(x)	A+B*i	0.66013548
J5x_2_7_cos_run1.txt	J5(x)	A+B/i	0.99854362
J5x_3_7_cos_run1.txt	J5(x)	A+B*sqrt(i)	0.93872178
J5x_4_7_cos_run1.txt	J5(x)	A+B*log(i)^4	0.99994703
ln_1_7_cos_run1.txt	ln(x)	A+B*i	0.99936173
ln_2_7_cos_run1.txt	ln(x)	A+B/i	0.99999974
ln_3_7_cos_run1.txt	ln(x)	A+B*sqrt(i)	0.99993384
ln_4_7_cos_run1.txt	ln(x)	A+B*log(i)^4	0.99985145
log10Gamma_1_7_cos_run1.txt	log10Gamma(x)	A+B*i	0.99997636
log10Gamma_2_7_cos_run1.txt	log10Gamma(x)	A+B/i	0.99996356
log10Gamma_3_7_cos_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999553
log10Gamma_4_7_cos_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99997282
log_1_7_cos_run1.txt	log(x)	A+B*i	0.99939611
log_2_7_cos_run1.txt	log(x)	A+B/i	0.99999939
log_3_7_cos_run1.txt	log(x)	A+B*sqrt(i)	0.99954116
log_4_7_cos_run1.txt	log(x)	A+B*log(i)^4	0.99994348
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	0.99995789
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)	0.99999455
sinh_4_7_cos_run1.txt	sinh(x)	A+B*log(i)^4	0.99999929
Si_1_7_cos_run1.txt	Si(x)	A+B*i	0.94093664
Si_2_7_cos_run1.txt	Si(x)	A+B/i	0.94706100

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Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_7_cos_run1.txt	Si(x)	A+B*sqrt(i)	0.93710211
Si_4_7_cos_run1.txt	Si(x)	A+B*log(i)^4	0.99576079
tanh_1_7_cos_run1.txt	tanh(x)	A+B*i	0.99999582
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	0.99999997
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
tinv1_1_7_cos_run1.txt	tinv(0.95,x)	A+B*i	0.78128950
tinv1_2_7_cos_run1.txt	tinv(0.95,x)	A+B/i	0.85971044
tinv1_3_7_cos_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.68208298
tinv1_4_7_cos_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.82461132
tinv2_1_7_cos_run1.txt	tinv(0.975,x)	A+B*i	0.91105961
tinv2_2_7_cos_run1.txt	tinv(0.975,x)	A+B/i	0.77916382
tinv2_3_7_cos_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.59741878
tinv2_4_7_cos_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.90095551
trigamma_1_7_cos_run1.txt	trigamma(x)	A+B*i	0.73094762
trigamma_2_7_cos_run1.txt	trigamma(x)	A+B/i	0.58522860
trigamma_3_7_cos_run1.txt	trigamma(x)	A+B*sqrt(i)	0.63218979
trigamma_4_7_cos_run1.txt	trigamma(x)	A+B*log(i)^4	0.55505632

Alternating Sine/Cosine Series of Order 3

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

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \cos(S_2 * gx(2,A_2,B_2) + Os_2)$$

$$+ a_3 * \sin(S_3 * gx(3,A_3,B_3) + Os_3)$$

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

Fourier-Shammas Series Approximations 3 Sine Cosine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_3_run1.txt	acosh(x)	A+B*i	0.98311234
acosh_2_3_run1.txt	acosh(x)	A+B/i	0.93819071
acosh_3_3_run1.txt	acosh(x)	A+B*sqrt(i)	0.93408714
acosh_4_3_run1.txt	acosh(x)	A+B*log(i)^4	0.97693937
arccos_1_3_run1.txt	arccos(x)	A+B*i	0.99892634
arccos_2_3_run1.txt	arccos(x)	A+B/i	0.99919783
arccos_3_3_run1.txt	arccos(x)	A+B*sqrt(i)	0.99883226
arccos_4_3_run1.txt	arccos(x)	A+B*log(i)^4	0.99915849
arcsin_1_3_run1.txt	arcsin(x)	A+B*i	0.99895961
arcsin_2_3_run1.txt	arcsin(x)	A+B/i	0.99877398
arcsin_3_3_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99889590
arcsin_4_3_run1.txt	arcsin(x)	A+B*log(i)^4	0.99881936
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	0.97711717
asinh_2_3_run1.txt	asinh(x)	A+B/i	0.93607597
asinh_3_3_run1.txt	asinh(x)	A+B*sqrt(i)	0.92190269
asinh_4_3_run1.txt	asinh(x)	A+B*log(i)^4	0.97265806
atanh_1_3_run1.txt	atanh(x)	A+B*i	0.98701908
atanh_2_3_run1.txt	atanh(x)	A+B/i	0.98556465
atanh_3_3_run1.txt	atanh(x)	A+B*sqrt(i)	0.98184508
atanh_4_3_run1.txt	atanh(x)	A+B*log(i)^4	0.98411136
CI_1_3_run1.txt	Ci(x)	A+B*i	0.95107562
Ci_2_3_run1.txt	Ci(x)	A+B/i	0.92197683
Ci_3_3_run1.txt	Ci(x)	A+B*sqrt(i)	0.85270051
CI_4_3_run1.txt	Ci(x)	A+B*log(i)^4	0.93234230
cosh_1_3_run1.txt	cosh(x)	A+B*i	0.99960086
cosh_2_3_run1.txt	cosh(x)	A+B/i	0.99998634
cosh_3_3_run1.txt	cosh(x)	A+B*sqrt(i)	0.99995002
cosh_4_3_run1.txt	cosh(x)	A+B*log(i)^4	0.99991391
diamma_2_3_run1.txt	digamma(x)	A+B/i	0.96043567
digamma_1_3_run1.txt	digamma(x)	A+B*i	0.95089668
digamma_3_3_run1.txt	digamma(x)	A+B*sqrt(i)	0.95172841
digamma_4_3_run1.txt	digamma(x)	A+B*log(i)^4	0.98712437
erf_1_3_run1.txt	erf(x)	A+B*i	1.00000000
erf_2_3_run1.txt	erf(x)	A+B/i	0.99999915
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	0.99999984
exp_1_3_run1.txt	exp(x)	A+B*i	0.99999994
exp_2_3_run1.txt	exp(x)	A+B/i	0.99999998
exp_3_3_run1.txt	exp(x)	A+B*sqrt(i)	0.99999999
exp_4_3_run1.txt	exp(x)	A+B*log(i)^4	0.99999940
FresnelCosine_1_3_run1.txt	FresnelCosine(x)	A+B*i	0.85803284
FresnelCosine_2_3_run1.txt	FresnelCosine(x)	A+B/i	0.81345244
FresnelCosine_3_3_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.75948077
FresnelCosine_4_3_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.77241491
FresnelSine_1_3_run1.txt	FresnelSine(x)	A+B*i	0.88917802

Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_3_run1.txt	FresnelSine(x)	A+B/i	0.89807817
FresnelSine_3_3_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.87116918
FresnelSine_4_3_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.83319080
J0x_1_3_run1.txt	J0(x)	A+B*i	0.98837719
J0x_2_3_run1.txt	J0(x)	A+B/i	0.98103740
J0x_3_3_run1.txt	J0(x)	A+B*sqrt(i)	0.98062978
J0x_4_3_run1.txt	J0(x)	A+B*log(i)^4	0.98171090
J1x_1_3_run1.txt	J1(x)	A+B*i	0.98409793
J1x_2_3_run1.txt	J1(x)	A+B/i	0.93804097
J1x_3_3_run1.txt	J1(x)	A+B*sqrt(i)	0.80106914
J1x_4_3_run1.txt	J1(x)	A+B*log(i)^4	0.97820542
J2x_1_3_run1.txt	J2(x)	A+B*i	0.94173485
J2x_2_3_run1.txt	J2(x)	A+B/i	0.84253304
J2x_3_3_run1.txt	J2(x)	A+B*sqrt(i)	0.74041820
J2x_4_3_run1.txt	J2(x)	A+B*log(i)^4	0.84459233
J3x_1_3_run1.txt	J3(x)	A+B*i	0.94915681
J3x_2_3_run1.txt	J3(x)	A+B/i	0.86269697
J3x_3_3_run1.txt	J3(x)	A+B*sqrt(i)	0.77668077
J3x_4_3_run1.txt	J3(x)	A+B*log(i)^4	0.93215483
J4x_1_3_run1.txt	J4(x)	A+B*i	0.77184918
J4x_2_3_run1.txt	J4(x)	A+B/i	0.78939354
J4x_3_3_run1.txt	J4(x)	A+B*sqrt(i)	0.82695461
J4x_4_3_run1.txt	J4(x)	A+B*log(i)^4	0.82082704
J5x_1_3_run1.txt	J5(x)	A+B*i	0.72838303
J5x_2_3_run1.txt	J5(x)	A+B/i	0.92276856
J5x_3_3_run1.txt	J5(x)	A+B*sqrt(i)	0.72834874
J5x_4_3_run1.txt	J5(x)	A+B*log(i)^4	0.92245984
ln_1_3_run1.txt	ln(x)	A+B*i	0.99930366
ln_2_3_run1.txt	ln(x)	A+B/i	0.99993904
ln_3_3_run1.txt	ln(x)	A+B*sqrt(i)	0.99995258
ln_4_3_run1.txt	ln(x)	A+B*log(i)^4	0.99997245
log10Gamma_1_3_run1.txt	log10Gamma(x)	A+B*i	0.99998649
log10Gamma_2_3_run1.txt	log10Gamma(x)	A+B/i	0.99995326
log10Gamma_3_3_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99993251
log10Gamma_4_3_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999015
log_1_3_run1.txt	log(x)	A+B*i	0.99929918
log_2_3_run1.txt	log(x)	A+B/i	0.99993245
log_3_3_run1.txt	log(x)	A+B*sqrt(i)	0.99988581
log_4_3_run1.txt	log(x)	A+B*log(i)^4	0.99969465
pwr10_1_3_run1.txt	10^x	A+B*i	0.99999991
pwr10_2_3_run1.txt	10^x	A+B/i	0.99999990
pwr10_3_3_run1.txt	10^x	A+B*sqrt(i)	0.99999990
pwr10_4_3_run1.txt	10^x	A+B*log(i)^4	0.99999990
sinh_1_3_run1.txt	sinh(x)	A+B*i	0.99993932
sinh_2_3_run1.txt	sinh(x)	A+B/i	0.99982463
sinh_3_3_run1.txt	sinh(x)	A+B*sqrt(i)	0.99991855
sinh_4_3_run1.txt	sinh(x)	A+B*log(i)^4	0.99997267
Si_1_3_run1.txt	Si(x)	A+B*i	0.90671631
Si_2_3_run1.txt	Si(x)	A+B/i	0.95814958

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_3_run1.txt	Si(x)	A+B*sqrt(i)	0.96207292
Si_4_3_run1.txt	Si(x)	A+B*log(i)^4	0.96828080
tanh_1_3_run1.txt	tanh(x)	A+B*i	0.99999575
tanh_2_3_run1.txt	tanh(x)	A+B/i	0.99999294
tanh_3_3_run1.txt	tanh(x)	A+B*sqrt(i)	0.99999792
tanh_4_3_run1.txt	tanh(x)	A+B*log(i)^4	0.99998174
tan_1_3_run1.txt	tan(x)	A+B*i	0.99999734
tan_2_3_run1.txt	tan(x)	A+B/i	0.99999457
tan_3_3_run1.txt	tan(x)	A+B*sqrt(i)	0.99999321
tan_4_3_run1.txt	tan(x)	A+B*log(i)^4	0.99999892
tinv1_1_3_run1.txt	tinv(0.95,x)	A+B*i	0.53988131
tinv1_2_3_run1.txt	tinv(0.95,x)	A+B/i	0.56589401
tinv1_3_3_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.54506024
tinv1_4_3_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.73696218
tinv2_1_3_run1.txt	tinv(0.975,x)	A+B*i	0.73432212
tinv2_2_3_run1.txt	tinv(0.975,x)	A+B/i	0.63446841
tinv2_3_3_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.51248983
tinv2_4_3_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.50602568
trigamma_1_3_run1.txt	trigamma(x)	A+B*i	0.40704011
trigamma_2_3_run1.txt	trigamma(x)	A+B/i	0.52086108
trigamma_3_3_run1.txt	trigamma(x)	A+B*sqrt(i)	0.41531714
trigamma_4_3_run1.txt	trigamma(x)	A+B*log(i)^4	0.58428168

Alternating Sine/Cosine Series of Order 4

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

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \cos(S_2 * gx(2,A_2,B_2) + Os_2)$$

$$+ \ldots + a_4 * \sin(S_4 * gx(4,A_4,B_4) + Os_4)$$

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

Fourier-Shammas Series Approximations 4 Sine Cosine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_4_run1.txt	acosh(x)	A+B*i	0.98393010
acosh_2_4_run1.txt	acosh(x)	A+B/i	0.96839463
acosh_3_4_run1.txt	acosh(x)	A+B*sqrt(i)	0.97918090
acosh_4_4_run1.txt	acosh(x)	A+B*log(i)^4	0.98252537
arccos_1_4_run1.txt	arccos(x)	A+B*i	0.99925404
arccos_2_4_run1.txt	arccos(x)	A+B/i	0.99916516
arccos_3_4_run1.txt	arccos(x)	A+B*sqrt(i)	0.99929493
arccos_4_4_run1.txt	arccos(x)	A+B*log(i)^4	0.99931270
arcsin_1_4_run1.txt	arcsin(x)	A+B*i	0.99930901
arcsin_2_4_run1.txt	arcsin(x)	A+B/i	0.99930064
arcsin_3_4_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99924822
arcsin_4_4_run1.txt	arcsin(x)	A+B*log(i)^4	0.99928385
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	0.98563477
asinh_2_4_run1.txt	asinh(x)	A+B/i	0.96332913
asinh_3_4_run1.txt	asinh(x)	A+B*sqrt(i)	0.97989788
asinh_4_4_run1.txt	asinh(x)	A+B*log(i)^4	0.98660438
atanh_1_4_run1.txt	atanh(x)	A+B*i	0.98829088
atanh_2_4_run1.txt	atanh(x)	A+B/i	0.98835822
atanh_3_4_run1.txt	atanh(x)	A+B*sqrt(i)	0.99048801
atanh_4_4_run1.txt	atanh(x)	A+B*log(i)^4	0.98886540
CI_1_4_run1.txt	Ci(x)	A+B*i	0.81407437
Ci_2_4_run1.txt	Ci(x)	A+B/i	0.97223903
Ci_3_4_run1.txt	Ci(x)	A+B*sqrt(i)	0.94705117
CI_4_4_run1.txt	Ci(x)	A+B*log(i)^4	0.97414067
cosh_1_4_run1.txt	cosh(x)	A+B*i	0.99986719
cosh_2_4_run1.txt	cosh(x)	A+B/i	0.99999895
cosh_3_4_run1.txt	cosh(x)	A+B*sqrt(i)	0.99999854
cosh_4_4_run1.txt	cosh(x)	A+B*log(i)^4	0.99997424
diamma_2_4_run1.txt	digamma(x)	A+B/i	0.95912764
digamma_1_4_run1.txt	digamma(x)	A+B*i	0.98788395
digamma_3_4_run1.txt	digamma(x)	A+B*sqrt(i)	0.98456559
digamma_4_4_run1.txt	digamma(x)	A+B*log(i)^4	0.99775007
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	0.99999999
FresnelCosine_1_4_run1.txt	FresnelCosine(x)	A+B*i	0.77605274
FresnelCosine_2_4_run1.txt	FresnelCosine(x)	A+B/i	0.93559619
FresnelCosine_3_4_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.93677759
FresnelCosine_4_4_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.93346892
FresnelSine_1_4_run1.txt	FresnelSine(x)	A+B*i	0.95455963

Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_4_run1.txt	FresnelSine(x)	A+B/i	0.94541795
FresnelSine_3_4_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.92789859
FresnelSine_4_4_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.83278851
J0x_1_4_run1.txt	J0(x)	A+B*i	0.96896787
J0x_2_4_run1.txt	J0(x)	A+B/i	0.99518791
J0x_3_4_run1.txt	J0(x)	A+B*sqrt(i)	0.99436089
J0x_4_4_run1.txt	J0(x)	A+B*log(i)^4	0.99503289
J1x_1_4_run1.txt	J1(x)	A+B*i	0.96814508
J1x_2_4_run1.txt	J1(x)	A+B/i	0.98405991
J1x_3_4_run1.txt	J1(x)	A+B*sqrt(i)	0.93783472
J1x_4_4_run1.txt	J1(x)	A+B*log(i)^4	0.96573213
J2x_1_4_run1.txt	J2(x)	A+B*i	0.93149930
J2x_2_4_run1.txt	J2(x)	A+B/i	0.99053858
J2x_3_4_run1.txt	J2(x)	A+B*sqrt(i)	0.84958846
J2x_4_4_run1.txt	J2(x)	A+B*log(i)^4	0.97190124
J3x_1_4_run1.txt	J3(x)	A+B*i	0.93208678
J3x_2_4_run1.txt	J3(x)	A+B/i	0.92528847
J3x_3_4_run1.txt	J3(x)	A+B*sqrt(i)	0.93322181
J3x_4_4_run1.txt	J3(x)	A+B*log(i)^4	0.94919375
J4x_1_4_run1.txt	J4(x)	A+B*i	0.93665283
J4x_2_4_run1.txt	J4(x)	A+B/i	0.91899372
J4x_3_4_run1.txt	J4(x)	A+B*sqrt(i)	0.92255274
J4x_4_4_run1.txt	J4(x)	A+B*log(i)^4	0.96473747
J5x_1_4_run1.txt	J5(x)	A+B*i	0.72339321
J5x_2_4_run1.txt	J5(x)	A+B/i	0.72742608
J5x_3_4_run1.txt	J5(x)	A+B*sqrt(i)	0.76128901
J5x_4_4_run1.txt	J5(x)	A+B*log(i)^4	0.99203468
ln_1_4_run1.txt	ln(x)	A+B*i	0.99937183
ln_2_4_run1.txt	ln(x)	A+B/i	0.99998620
ln_3_4_run1.txt	ln(x)	A+B*sqrt(i)	0.99998100
ln_4_4_run1.txt	ln(x)	A+B*log(i)^4	0.99968765
log10Gamma_1_4_run1.txt	log10Gamma(x)	A+B*i	0.99999174
log10Gamma_2_4_run1.txt	log10Gamma(x)	A+B/i	0.99993761
log10Gamma_3_4_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99998699
log10Gamma_4_4_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999755
log_1_4_run1.txt	log(x)	A+B*i	0.99935795
log_2_4_run1.txt	log(x)	A+B/i	0.99998543
log_3_4_run1.txt	log(x)	A+B*sqrt(i)	0.99920194
log_4_4_run1.txt	log(x)	A+B*log(i)^4	0.99967651
pwr10_1_4_run1.txt	10^x	A+B*i	0.99999999
pwr10_2_4_run1.txt	10^x	A+B/i	0.99999999
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	0.99949830
sinh_2_4_run1.txt	sinh(x)	A+B/i	0.99999936
sinh_3_4_run1.txt	sinh(x)	A+B*sqrt(i)	0.99999762
sinh_4_4_run1.txt	sinh(x)	A+B*log(i)^4	0.99997113
Si_1_4_run1.txt	Si(x)	A+B*i	0.89842030
Si_2_4_run1.txt	Si(x)	A+B/i	0.98064399

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_4_run1.txt	Si(x)	A+B*sqrt(i)	0.92773814
Si_4_4_run1.txt	Si(x)	A+B*log(i)^4	0.94751149
tanh_1_4_run1.txt	tanh(x)	A+B*i	0.99999953
tanh_2_4_run1.txt	tanh(x)	A+B/i	0.99999968
tanh_3_4_run1.txt	tanh(x)	A+B*sqrt(i)	0.99999994
tanh_4_4_run1.txt	tanh(x)	A+B*log(i)^4	0.99999122
tan_1_4_run1.txt	tan(x)	A+B*i	0.99999991
tan_2_4_run1.txt	tan(x)	A+B/i	0.99999988
tan_3_4_run1.txt	tan(x)	A+B*sqrt(i)	0.99999990
tan_4_4_run1.txt	tan(x)	A+B*log(i)^4	0.99999989
tinv1_1_4_run1.txt	tinv(0.95,x)	A+B*i	0.81607068
tinv1_2_4_run1.txt	tinv(0.95,x)	A+B/i	0.65544681
tinv1_3_4_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.77101178
tinv1_4_4_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.86548488
tinv2_1_4_run1.txt	tinv(0.975,x)	A+B*i	0.69169528
tinv2_2_4_run1.txt	tinv(0.975,x)	A+B/i	0.60952732
tinv2_3_4_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.73062962
tinv2_4_4_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.72806929
trigamma_1_4_run1.txt	trigamma(x)	A+B*i	0.69895935
trigamma_2_4_run1.txt	trigamma(x)	A+B/i	0.50764309
trigamma_3_4_run1.txt	trigamma(x)	A+B*sqrt(i)	0.59463183
trigamma_4_4_run1.txt	trigamma(x)	A+B*log(i)^4	0.65511930

Alternating Sine/Cosine Series of Order 5

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

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \cos(S_2 * gx(2,A_2,B_2) + Os_2)$$

$$+ \ldots + a_5 * \sin(S_5 * gx(5,A_5,B_5) + Os_5)$$

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

Fourier-Shammas Series Approximations 5 Sine Cosine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_5_run1.txt	acosh(x)	A+B*i	0.97230437
acosh_2_5_run1.txt	acosh(x)	A+B/i	0.93614248
acosh_3_5_run1.txt	acosh(x)	A+B*sqrt(i)	0.97868656
acosh_4_5_run1.txt	acosh(x)	A+B*log(i)^4	0.98427427
arccos_1_5_run1.txt	arccos(x)	A+B*i	0.99950683
arccos_2_5_run1.txt	arccos(x)	A+B/i	0.99949569
arccos_3_5_run1.txt	arccos(x)	A+B*sqrt(i)	0.99951788
arccos_4_5_run1.txt	arccos(x)	A+B*log(i)^4	0.99963318
arcsin_1_5_run1.txt	arcsin(x)	A+B*i	0.99947893
arcsin_2_5_run1.txt	arcsin(x)	A+B/i	0.99950119
arcsin_3_5_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99954147
arcsin_4_5_run1.txt	arcsin(x)	A+B*log(i)^4	0.99955037
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	0.99184477
asinh_2_5_run1.txt	asinh(x)	A+B/i	0.94459730
asinh_3_5_run1.txt	asinh(x)	A+B*sqrt(i)	0.97475926
asinh_4_5_run1.txt	asinh(x)	A+B*log(i)^4	0.97673933
atanh_1_5_run1.txt	atanh(x)	A+B*i	0.99086411
atanh_2_5_run1.txt	atanh(x)	A+B/i	0.99217506
atanh_3_5_run1.txt	atanh(x)	A+B*sqrt(i)	0.99222900
atanh_4_5_run1.txt	atanh(x)	A+B*log(i)^4	0.99212838
CI_1_5_run1.txt	Ci(x)	A+B*i	0.97183407
Ci_2_5_run1.txt	Ci(x)	A+B/i	0.96138249
Ci_3_5_run1.txt	Ci(x)	A+B*sqrt(i)	0.89080621
CI_4_5_run1.txt	Ci(x)	A+B*log(i)^4	0.92613193
cosh_1_5_run1.txt	cosh(x)	A+B*i	0.99946847
cosh_2_5_run1.txt	cosh(x)	A+B/i	0.99999981
cosh_3_5_run1.txt	cosh(x)	A+B*sqrt(i)	0.99999377
cosh_4_5_run1.txt	cosh(x)	A+B*log(i)^4	0.99996674
diamma_2_5_run1.txt	digamma(x)	A+B/i	0.97570556
digamma_1_5_run1.txt	digamma(x)	A+B*i	0.99623660
digamma_3_5_run1.txt	digamma(x)	A+B*sqrt(i)	0.98797485
digamma_4_5_run1.txt	digamma(x)	A+B*log(i)^4	0.98715487
erf_1_5_run1.txt	erf(x)	A+B*i	0.99999997
erf_2_5_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_5_run1.txt	erf(x)	A+B*sqrt(i)	0.99999998
erf_4_5_run1.txt	erf(x)	A+B*log(i)^4	0.99999997
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	0.98354295
FresnelCosine_2_5_run1.txt	FresnelCosine(x)	A+B/i	0.95551132
FresnelCosine_3_5_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.97163677
FresnelCosine_4_5_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.89041640
FresnelSine_1_5_run1.txt	FresnelSine(x)	A+B*i	0.97544087

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Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_5_run1.txt	FresnelSine(x)	A+B/i	0.99516924
FresnelSine_3_5_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.98508384
FresnelSine_4_5_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.99657878
J0x_1_5_run1.txt	J0(x)	A+B*i	0.99843576
J0x_2_5_run1.txt	J0(x)	A+B/i	0.99705692
J0x_3_5_run1.txt	J0(x)	A+B*sqrt(i)	0.99361861
J0x_4_5_run1.txt	J0(x)	A+B*log(i)^4	0.97667920
J1x_1_5_run1.txt	J1(x)	A+B*i	0.97357608
J1x_2_5_run1.txt	J1(x)	A+B/i	0.98291192
J1x_3_5_run1.txt	J1(x)	A+B*sqrt(i)	0.98735048
J1x_4_5_run1.txt	J1(x)	A+B*log(i)^4	0.91721293
J2x_1_5_run1.txt	J2(x)	A+B*i	0.83896967
J2x_2_5_run1.txt	J2(x)	A+B/i	0.97739704
J2x_3_5_run1.txt	J2(x)	A+B*sqrt(i)	0.83722601
J2x_4_5_run1.txt	J2(x)	A+B*log(i)^4	0.99978544
J3x_1_5_run1.txt	J3(x)	A+B*i	0.95958184
J3x_2_5_run1.txt	J3(x)	A+B/i	0.97112434
J3x_3_5_run1.txt	J3(x)	A+B*sqrt(i)	0.91301497
J3x_4_5_run1.txt	J3(x)	A+B*log(i)^4	0.97826370
J4x_1_5_run1.txt	J4(x)	A+B*i	0.99935771
J4x_2_5_run1.txt	J4(x)	A+B/i	0.91885073
J4x_3_5_run1.txt	J4(x)	A+B*sqrt(i)	0.99564416
J4x_4_5_run1.txt	J4(x)	A+B*log(i)^4	0.91684690
J5x_1_5_run1.txt	J5(x)	A+B*i	0.98424380
J5x_2_5_run1.txt	J5(x)	A+B/i	0.96339837
J5x_3_5_run1.txt	J5(x)	A+B*sqrt(i)	0.95264387
J5x_4_5_run1.txt	J5(x)	A+B*log(i)^4	0.96607050
ln_1_5_run1.txt	ln(x)	A+B*i	0.99937707
ln_2_5_run1.txt	ln(x)	A+B/i	0.99999222
ln_3_5_run1.txt	ln(x)	A+B*sqrt(i)	0.99956372
ln_4_5_run1.txt	ln(x)	A+B*log(i)^4	0.99985511
log10Gamma_1_5_run1.txt	log10Gamma(x)	A+B*i	0.99998685
log10Gamma_2_5_run1.txt	log10Gamma(x)	A+B/i	0.99995314
log10Gamma_3_5_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99996419
log10Gamma_4_5_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99998688
log_1_5_run1.txt	log(x)	A+B*i	0.99937469
log_2_5_run1.txt	log(x)	A+B/i	0.99998382
log_3_5_run1.txt	log(x)	A+B*sqrt(i)	0.99936864
log_4_5_run1.txt	log(x)	A+B*log(i)^4	0.99954959
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	0.99996284
sinh_2_5_run1.txt	sinh(x)	A+B/i	0.99999995
sinh_3_5_run1.txt	sinh(x)	A+B*sqrt(i)	0.99999949
sinh_4_5_run1.txt	sinh(x)	A+B*log(i)^4	0.99997708
Si_1_5_run1.txt	Si(x)	A+B*i	0.98395690
Si_2_5_run1.txt	Si(x)	A+B/i	0.89751871

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_5_run1.txt	Si(x)	A+B*sqrt(i)	0.97890762
Si_4_5_run1.txt	Si(x)	A+B*log(i)^4	0.97642566
tanh_1_5_run1.txt	tanh(x)	A+B*i	0.99997044
tanh_2_5_run1.txt	tanh(x)	A+B/i	0.99999997
tanh_3_5_run1.txt	tanh(x)	A+B*sqrt(i)	0.99999999
tanh_4_5_run1.txt	tanh(x)	A+B*log(i)^4	0.99999963
tan_1_5_run1.txt	tan(x)	A+B*i	1.00000000
tan_2_5_run1.txt	tan(x)	A+B/i	0.99999998
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	0.99999994
tinv1_1_5_run1.txt	tinv(0.95,x)	A+B*i	0.88941843
tinv1_2_5_run1.txt	tinv(0.95,x)	A+B/i	0.63998090
tinv1_3_5_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.71655515
tinv1_4_5_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.86894109
tinv2_1_5_run1.txt	tinv(0.975,x)	A+B*i	0.75475769
tinv2_2_5_run1.txt	tinv(0.975,x)	A+B/i	0.60773076
tinv2_3_5_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.75928413
tinv2_4_5_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.88151905
trigamma_1_5_run1.txt	trigamma(x)	A+B*i	0.67340374
trigamma_2_5_run1.txt	trigamma(x)	A+B/i	0.56952684
trigamma_3_5_run1.txt	trigamma(x)	A+B*sqrt(i)	0.68050937
trigamma_4_5_run1.txt	trigamma(x)	A+B*log(i)^4	0.76256911

Alternating Sine/Cosine Series of Order 6

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

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \cos(S_2 * gx(2,A_2,B_2) + Os_2)$$

$$+ \ldots + a_6 * \sin(S_6 * gx(6,A_6,B_6) + Os_6)$$

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

Fourier-Shammas Series Approximations 6 Sine Cosine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_6_run1.txt	acosh(x)	A+B*i	0.99308040
acosh_2_6_run1.txt	acosh(x)	A+B/i	0.97928221
acosh_3_6_run1.txt	acosh(x)	A+B*sqrt(i)	0.98239340
acosh_4_6_run1.txt	acosh(x)	A+B*log(i)^4	0.99336719
arccos_1_6_run1.txt	arccos(x)	A+B*i	0.99965465
arccos_2_6_run1.txt	arccos(x)	A+B/i	0.99961118
arccos_3_6_run1.txt	arccos(x)	A+B*sqrt(i)	0.99958747
arccos_4_6_run1.txt	arccos(x)	A+B*log(i)^4	0.99949306
arcsin_1_6_run1.txt	arcsin(x)	A+B*i	0.99959380
arcsin_2_6_run1.txt	arcsin(x)	A+B/i	0.99963005
arcsin_3_6_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99968111
arcsin_4_6_run1.txt	arcsin(x)	A+B*log(i)^4	0.99966393
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	0.97891495
asinh_2_6_run1.txt	asinh(x)	A+B/i	0.97113337
asinh_3_6_run1.txt	asinh(x)	A+B*sqrt(i)	0.96067381
asinh_4_6_run1.txt	asinh(x)	A+B*log(i)^4	0.99180755
atanh_1_6_run1.txt	atanh(x)	A+B*i	0.99399825
atanh_2_6_run1.txt	atanh(x)	A+B/i	0.99447094
atanh_3_6_run1.txt	atanh(x)	A+B*sqrt(i)	0.99456869
atanh_4_6_run1.txt	atanh(x)	A+B*log(i)^4	0.99482858
CI_1_6_run1.txt	Ci(x)	A+B*i	0.89436997
Ci_2_6_run1.txt	Ci(x)	A+B/i	0.85216843
Ci_3_6_run1.txt	Ci(x)	A+B*sqrt(i)	0.96510551
CI_4_6_run1.txt	Ci(x)	A+B*log(i)^4	0.98801488
cosh_1_6_run1.txt	cosh(x)	A+B*i	0.99991531
cosh_2_6_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_6_run1.txt	cosh(x)	A+B*sqrt(i)	0.99999939
cosh_4_6_run1.txt	cosh(x)	A+B*log(i)^4	0.99998840
diamma_2_6_run1.txt	digamma(x)	A+B/i	0.98014400
digamma_1_6_run1.txt	digamma(x)	A+B*i	0.99031177
digamma_3_6_run1.txt	digamma(x)	A+B*sqrt(i)	0.99474918
digamma_4_6_run1.txt	digamma(x)	A+B*log(i)^4	0.97985651
erf_1_6_run1.txt	erf(x)	A+B*i	0.99999998
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	0.92535009
FresnelCosine_2_6_run1.txt	FresnelCosine(x)	A+B/i	0.93484543
FresnelCosine_3_6_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.97270527
FresnelCosine_4_6_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.93839421
FresnelSine_1_6_run1.txt	FresnelSine(x)	A+B*i	0.87779054

Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_6_run1.txt	FresnelSine(x)	A+B/i	0.99678517
FresnelSine_3_6_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.97681263
FresnelSine_4_6_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.94311959
J0x_1_6_run1.txt	J0(x)	A+B*i	0.99764929
J0x_2_6_run1.txt	J0(x)	A+B/i	0.97137029
J0x_3_6_run1.txt	J0(x)	A+B*sqrt(i)	0.99349185
J0x_4_6_run1.txt	J0(x)	A+B*log(i)^4	0.99908125
J1x_1_6_run1.txt	J1(x)	A+B*i	0.96896700
J1x_2_6_run1.txt	J1(x)	A+B/i	0.99550998
J1x_3_6_run1.txt	J1(x)	A+B*sqrt(i)	0.98317129
J1x_4_6_run1.txt	J1(x)	A+B*log(i)^4	0.99995870
J2x_1_6_run1.txt	J2(x)	A+B*i	0.93629402
J2x_2_6_run1.txt	J2(x)	A+B/i	0.89979348
J2x_3_6_run1.txt	J2(x)	A+B*sqrt(i)	0.99984542
J2x_4_6_run1.txt	J2(x)	A+B*log(i)^4	0.99455450
J3x_1_6_run1.txt	J3(x)	A+B*i	0.85623962
J3x_2_6_run1.txt	J3(x)	A+B/i	0.83797379
J3x_3_6_run1.txt	J3(x)	A+B*sqrt(i)	0.97664892
J3x_4_6_run1.txt	J3(x)	A+B*log(i)^4	0.97440884
J4x_1_6_run1.txt	J4(x)	A+B*i	0.93297018
J4x_2_6_run1.txt	J4(x)	A+B/i	0.99878506
J4x_3_6_run1.txt	J4(x)	A+B*sqrt(i)	0.89943791
J4x_4_6_run1.txt	J4(x)	A+B*log(i)^4	0.95515916
J5x_1_6_run1.txt	J5(x)	A+B*i	0.99957111
J5x_2_6_run1.txt	J5(x)	A+B/i	0.98714572
J5x_3_6_run1.txt	J5(x)	A+B*sqrt(i)	0.88212974
J5x_4_6_run1.txt	J5(x)	A+B*log(i)^4	0.98070336
ln_1_6_run1.txt	ln(x)	A+B*i	0.99932410
ln_2_6_run1.txt	ln(x)	A+B/i	0.99999865
ln_3_6_run1.txt	ln(x)	A+B*sqrt(i)	0.99997770
ln_4_6_run1.txt	ln(x)	A+B*log(i)^4	0.99960497
log10Gamma_1_6_run1.txt	log10Gamma(x)	A+B*i	0.99998610
log10Gamma_2_6_run1.txt	log10Gamma(x)	A+B/i	0.99996327
log10Gamma_3_6_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99998759
log10Gamma_4_6_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99997692
log_1_6_run1.txt	log(x)	A+B*i	0.99951062
log_2_6_run1.txt	log(x)	A+B/i	0.99999898
log_3_6_run1.txt	log(x)	A+B*sqrt(i)	0.99987812
log_4_6_run1.txt	log(x)	A+B*log(i)^4	0.99965570
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	0.99987929
sinh_2_6_run1.txt	sinh(x)	A+B/i	1.00000000
sinh_3_6_run1.txt	sinh(x)	A+B*sqrt(i)	0.99998677
sinh_4_6_run1.txt	sinh(x)	A+B*log(i)^4	0.99997947
Si_1_6_run1.txt	Si(x)	A+B*i	0.99583383
Si_2_6_run1.txt	Si(x)	A+B/i	0.97635658

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_6_run1.txt	Si(x)	A+B*sqrt(i)	0.93812060
Si_4_6_run1.txt	Si(x)	A+B*log(i)^4	0.94832871
tanh_1_6_run1.txt	tanh(x)	A+B*i	0.99999978
tanh_2_6_run1.txt	tanh(x)	A+B/i	1.00000000
tanh_3_6_run1.txt	tanh(x)	A+B*sqrt(i)	0.99999981
tanh_4_6_run1.txt	tanh(x)	A+B*log(i)^4	0.99999564
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
tinv1_1_6_run1.txt	tinv(0.95,x)	A+B*i	0.67759499
tinv1_2_6_run1.txt	tinv(0.95,x)	A+B/i	0.75983540
tinv1_3_6_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.77899651
tinv1_4_6_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.87455027
tinv2_1_6_run1.txt	tinv(0.975,x)	A+B*i	0.86215138
tinv2_2_6_run1.txt	tinv(0.975,x)	A+B/i	0.78463154
tinv2_3_6_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.81391864
tinv2_4_6_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.65306000
trigamma_1_6_run1.txt	trigamma(x)	A+B*i	0.64306243
trigamma_2_6_run1.txt	trigamma(x)	A+B/i	0.58952771
trigamma_3_6_run1.txt	trigamma(x)	A+B*sqrt(i)	0.62448862
trigamma_4_6_run1.txt	trigamma(x)	A+B*log(i)^4	0.75553831

Alternating Sine/Cosine Series of Order 7

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

$$Y = a_0 + a_1 * \sin(S_1 * gx(1,A_1,B_1) + Os_1) + a_1 * \cos(S_2 * gx(2,A_2,B_2) + Os_2)$$

$$+ \ldots + a_7 * \sin(S_7 * gx(7,A_7,B_7) + Os_7)$$

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

Fourier-Shammas Series Approximations 7 Sine Cosine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_7_run1.txt	acosh(x)	A+B*i	0.96942805
acosh_2_7_run1.txt	acosh(x)	A+B/i	0.96307050
acosh_3_7_run1.txt	acosh(x)	A+B*sqrt(i)	0.98583735
acosh_4_7_run1.txt	acosh(x)	A+B*log(i)^4	0.98275244
arccos_1_7_run1.txt	arccos(x)	A+B*i	0.99970603
arccos_2_7_run1.txt	arccos(x)	A+B/i	0.99974918
arccos_3_7_run1.txt	arccos(x)	A+B*sqrt(i)	0.99973389
arccos_4_7_run1.txt	arccos(x)	A+B*log(i)^4	0.99969453
arcsin_1_7_run1.txt	arcsin(x)	A+B*i	0.99974157
arcsin_2_7_run1.txt	arcsin(x)	A+B/i	0.99970852
arcsin_3_7_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99970806
arcsin_4_7_run1.txt	arcsin(x)	A+B*log(i)^4	0.99974777
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	0.99394148
asinh_2_7_run1.txt	asinh(x)	A+B/i	0.94828090
asinh_3_7_run1.txt	asinh(x)	A+B*sqrt(i)	0.96730300
asinh_4_7_run1.txt	asinh(x)	A+B*log(i)^4	0.98612241
atanh_1_7_run1.txt	atanh(x)	A+B*i	0.99571880
atanh_2_7_run1.txt	atanh(x)	A+B/i	0.99562641
atanh_3_7_run1.txt	atanh(x)	A+B*sqrt(i)	0.99562814
atanh_4_7_run1.txt	atanh(x)	A+B*log(i)^4	0.99241911
CI_1_7_run1.txt	Ci(x)	A+B*i	0.97335309
Ci_2_7_run1.txt	Ci(x)	A+B/i	0.98729910
Ci_3_7_run1.txt	Ci(x)	A+B*sqrt(i)	0.92745656
CI_4_7_run1.txt	Ci(x)	A+B*log(i)^4	0.91632633
cosh_1_7_run1.txt	cosh(x)	A+B*i	0.99993906
cosh_2_7_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_7_run1.txt	cosh(x)	A+B*sqrt(i)	0.99998091
cosh_4_7_run1.txt	cosh(x)	A+B*log(i)^4	0.99999786
diamma_2_7_run1.txt	digamma(x)	A+B/i	0.98414233
digamma_1_7_run1.txt	digamma(x)	A+B*i	0.98219031
digamma_3_7_run1.txt	digamma(x)	A+B*sqrt(i)	0.99235604
digamma_4_7_run1.txt	digamma(x)	A+B*log(i)^4	0.99672475
erf_1_7_run1.txt	erf(x)	A+B*i	0.99999999
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	0.99999997
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	0.93935353
FresnelCosine_2_7_run1.txt	FresnelCosine(x)	A+B/i	0.96053193
FresnelCosine_3_7_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.94823854
FresnelCosine_4_7_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.94836857
FresnelSine_1_7_run1.txt	FresnelSine(x)	A+B*i	0.97938128

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Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_7_run1.txt	FresnelSine(x)	A+B/i	0.97001060
FresnelSine_3_7_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.99746182
FresnelSine_4_7_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.98912307
J0x_1_7_run1.txt	J0(x)	A+B*i	0.94648676
J0x_2_7_run1.txt	J0(x)	A+B/i	0.99402459
J0x_3_7_run1.txt	J0(x)	A+B*sqrt(i)	0.99498892
J0x_4_7_run1.txt	J0(x)	A+B*log(i)^4	0.99599906
J1x_1_7_run1.txt	J1(x)	A+B*i	0.95873580
J1x_2_7_run1.txt	J1(x)	A+B/i	0.97017661
J1x_3_7_run1.txt	J1(x)	A+B*sqrt(i)	0.92708763
J1x_4_7_run1.txt	J1(x)	A+B*log(i)^4	0.95489529
J2x_1_7_run1.txt	J2(x)	A+B*i	0.98238396
J2x_2_7_run1.txt	J2(x)	A+B/i	0.88366737
J2x_3_7_run1.txt	J2(x)	A+B*sqrt(i)	0.93958619
J2x_4_7_run1.txt	J2(x)	A+B*log(i)^4	0.99899923
J3x_1_7_run1.txt	J3(x)	A+B*i	0.96258092
J3x_2_7_run1.txt	J3(x)	A+B/i	0.99132446
J3x_3_7_run1.txt	J3(x)	A+B*sqrt(i)	0.98442485
J3x_4_7_run1.txt	J3(x)	A+B*log(i)^4	0.84375826
J4x_1_7_run1.txt	J4(x)	A+B*i	0.89026851
J4x_2_7_run1.txt	J4(x)	A+B/i	0.90756536
J4x_3_7_run1.txt	J4(x)	A+B*sqrt(i)	0.93990052
J4x_4_7_run1.txt	J4(x)	A+B*log(i)^4	0.74929787
J5x_1_7_run1.txt	J5(x)	A+B*i	0.97663114
J5x_2_7_run1.txt	J5(x)	A+B/i	0.99997774
J5x_3_7_run1.txt	J5(x)	A+B*sqrt(i)	0.86962064
J5x_4_7_run1.txt	J5(x)	A+B*log(i)^4	0.98798314
ln_1_7_run1.txt	ln(x)	A+B*i	0.99950944
ln_2_7_run1.txt	ln(x)	A+B/i	0.99999935
ln_3_7_run1.txt	ln(x)	A+B*sqrt(i)	0.99966003
ln_4_7_run1.txt	ln(x)	A+B*log(i)^4	0.99996308
log10Gamma_1_7_run1.txt	log10Gamma(x)	A+B*i	0.99998682
log10Gamma_2_7_run1.txt	log10Gamma(x)	A+B/i	0.99996554
log10Gamma_3_7_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99998847
log10Gamma_4_7_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99998316
log_1_7_run1.txt	log(x)	A+B*i	0.99940082
log_2_7_run1.txt	log(x)	A+B/i	0.99999981
log_3_7_run1.txt	log(x)	A+B*sqrt(i)	0.99994981
log_4_7_run1.txt	log(x)	A+B*log(i)^4	0.99957298
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	0.99997046
sinh_2_7_run1.txt	sinh(x)	A+B/i	1.00000000
sinh_3_7_run1.txt	sinh(x)	A+B*sqrt(i)	0.99999668
sinh_4_7_run1.txt	sinh(x)	A+B*log(i)^4	0.99997789
Si_1_7_run1.txt	Si(x)	A+B*i	0.88642497
Si_2_7_run1.txt	Si(x)	A+B/i	0.98282235

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Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_7_run1.txt	Si(x)	A+B*sqrt(i)	0.89301359
Si_4_7_run1.txt	Si(x)	A+B*log(i)^4	0.95761049
tanh_1_7_run1.txt	tanh(x)	A+B*i	0.99999993
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	0.99999969
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
tinv1_1_7_run1.txt	tinv(0.95,x)	A+B*i	0.74055521
tinv1_2_7_run1.txt	tinv(0.95,x)	A+B/i	0.85570781
tinv1_3_7_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.84408167
tinv1_4_7_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.93613088
tinv2_1_7_run1.txt	tinv(0.975,x)	A+B*i	0.86851639
tinv2_2_7_run1.txt	tinv(0.975,x)	A+B/i	0.77753706
tinv2_3_7_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.75197093
tinv2_4_7_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.74517058
trigamma_1_7_run1.txt	trigamma(x)	A+B*i	0.52330889
trigamma_2_7_run1.txt	trigamma(x)	A+B/i	0.57381155
trigamma_3_7_run1.txt	trigamma(x)	A+B*sqrt(i)	0.62594949
trigamma_4_7_run1.txt	trigamma(x)	A+B*log(i)^4	0.75665639

Alternating Cosine/Sine Series of Order 7

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

$$Y = a_0 + a_1 * \cos(S_1 * gx(1,A_1,B_1) + Os_1) + a_2 * \sin(S_2 * gx(2,A_2,B_2) + Os_2)$$

$$+ \ldots + a_7 * \cos(S_7 * gx(7,A_7,B_7) + Os_7)$$

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

Fourier-Shammas Series Approximations 7 Cosine Sine

Filename	Function	gx(i,A,B)	Rsqr Adj
acosh_1_7_cossin_run1.txt	acosh(x)	A+B*i	0.97074788
acosh_2_7_cossin_run1.txt	acosh(x)	A+B/i	0.96521510
acosh_3_7_cossin_run1.txt	acosh(x)	A+B*sqrt(i)	0.98676050
acosh_4_7_cossin_run1.txt	acosh(x)	A+B*log(i)^4	0.99387044
arccos_1_7_cossin_run1.txt	arccos(x)	A+B*i	0.99970561
arccos_2_7_cossin_run1.txt	arccos(x)	A+B/i	0.99976151
arccos_3_7_cossin_run1.txt	arccos(x)	A+B*sqrt(i)	0.99974287
arccos_4_7_cossin_run1.txt	arccos(x)	A+B*log(i)^4	0.99975358
arcsin_1_7_cossin_run1.txt	arcsin(x)	A+B*i	0.99962975
arcsin_2_7_cossin_run1.txt	arcsin(x)	A+B/i	0.99975118
arcsin_3_7_cossin_run1.txt	arcsin(x)	A+B*sqrt(i)	0.99973604
arcsin_4_7_cossin_run1.txt	arcsin(x)	A+B*log(i)^4	0.99978912
arctan_1_7_cossin_run1.txt	arctan(x)	A+B*i	1.00000000
arctan_2_7_cossin_run1.txt	arctan(x)	A+B/i	1.00000000
arctan_3_7_cossin_run1.txt	arctan(x)	A+B*sqrt(i)	1.00000000
arctan_4_7_cossin_run1.txt	arctan(x)	A+B*log(i)^4	1.00000000
asinh_1_7_cossin_run1.txt	asinh(x)	A+B*i	0.95826629
asinh_2_7_cossin_run1.txt	asinh(x)	A+B/i	0.97189903
asinh_3_7_cossin_run1.txt	asinh(x)	A+B*sqrt(i)	0.97517872
asinh_4_7_cossin_run1.txt	asinh(x)	A+B*log(i)^4	0.97872337
atanh_1_7_cossin_run1.txt	atanh(x)	A+B*i	0.99563465
atanh_2_7_cossin_run1.txt	atanh(x)	A+B/i	0.99573280
atanh_3_7_cossin_run1.txt	atanh(x)	A+B*sqrt(i)	0.99550102
atanh_4_7_cossin_run1.txt	atanh(x)	A+B*log(i)^4	0.99499593
CI_1_7_cossin_run1.txt	Ci(x)	A+B*i	0.91160472
Ci_2_7_cossin_run1.txt	Ci(x)	A+B/i	0.98699584
Ci_3_7_cossin_run1.txt	Ci(x)	A+B*sqrt(i)	0.96967323
CI_4_7_cossin_run1.txt	Ci(x)	A+B*log(i)^4	0.92035107
cosh_1_7_cossin_run1.txt	cosh(x)	A+B*i	0.99994833
cosh_2_7_cossin_run1.txt	cosh(x)	A+B/i	1.00000000
cosh_3_7_cossin_run1.txt	cosh(x)	A+B*sqrt(i)	0.99998116
cosh_4_7_cossin_run1.txt	cosh(x)	A+B*log(i)^4	0.99998772
diamma_2_7_cossin_run1.txt	digamma(x)	A+B/i	0.97454631
digamma_1_7_cossin_run1.txt	digamma(x)	A+B*i	0.99350579
digamma_3_7_cossin_run1.txt	digamma(x)	A+B*sqrt(i)	0.98482435
digamma_4_7_cossin_run1.txt	digamma(x)	A+B*log(i)^4	0.98468027
erf_1_7_cossin_run1.txt	erf(x)	A+B*i	0.99999999
erf_2_7_cossin_run1.txt	erf(x)	A+B/i	1.00000000
erf_3_7_cossin_run1.txt	erf(x)	A+B*sqrt(i)	1.00000000
erf_4_7_cossin_run1.txt	erf(x)	A+B*log(i)^4	0.99999978
exp_1_7_cossin_run1.txt	exp(x)	A+B*i	0.99999997
exp_2_7_cossin_run1.txt	exp(x)	A+B/i	1.00000000
exp_3_7_cossin_run1.txt	exp(x)	A+B*sqrt(i)	1.00000000
exp_4_7_cossin_run1.txt	exp(x)	A+B*log(i)^4	1.00000000
FresnelCosine_1_7_cossin_run1.txt	FresnelCosine(x)	A+B*i	0.97878997
FresnelCosine_2_7_cossin_run1.txt	FresnelCosine(x)	A+B/i	0.98007425
FresnelCosine_3_7_cossin_run1.txt	FresnelCosine(x)	A+B*sqrt(i)	0.97216454
FresnelCosine_4_7_cossin_run1.txt	FresnelCosine(x)	A+B*log(i)^4	0.98122853
FresnelSine_1_7_cossin_run1.txt	FresnelSine(x)	A+B*i	0.99564314

Filename	Function	gx(i,A,B)	Rsqr Adj
FresnelSine_2_7_cossin_run1.txt	FresnelSine(x)	A+B/i	0.98394110
FresnelSine_3_7_cossin_run1.txt	FresnelSine(x)	A+B*sqrt(i)	0.99687842
FresnelSine_4_7_cossin_run1.txt	FresnelSine(x)	A+B*log(i)^4	0.99944045
J0x_1_7_cossin_run1.txt	J0(x)	A+B*i	0.99955867
J0x_2_7_cossin_run1.txt	J0(x)	A+B/i	0.99779423
J0x_3_7_cossin_run1.txt	J0(x)	A+B*sqrt(i)	0.99551710
J0x_4_7_cossin_run1.txt	J0(x)	A+B*log(i)^4	0.99844964
J1x_1_7_cossin_run1.txt	J1(x)	A+B*i	0.99997153
J1x_2_7_cossin_run1.txt	J1(x)	A+B/i	0.98334111
J1x_3_7_cossin_run1.txt	J1(x)	A+B*sqrt(i)	0.99164674
J1x_4_7_cossin_run1.txt	J1(x)	A+B*log(i)^4	0.95400650
J2x_1_7_cossin_run1.txt	J2(x)	A+B*i	0.99828805
J2x_2_7_cossin_run1.txt	J2(x)	A+B/i	0.99993482
J2x_3_7_cossin_run1.txt	J2(x)	A+B*sqrt(i)	0.83352446
J2x_4_7_cossin_run1.txt	J2(x)	A+B*log(i)^4	0.95337945
J3x_1_7_cossin_run1.txt	J3(x)	A+B*i	0.99767324
J3x_2_7_cossin_run1.txt	J3(x)	A+B/i	0.99996893
J3x_3_7_cossin_run1.txt	J3(x)	A+B*sqrt(i)	0.97882377
J3x_4_7_cossin_run1.txt	J3(x)	A+B*log(i)^4	0.96675752
J4x_1_7_cossin_run1.txt	J4(x)	A+B*i	0.93306666
J4x_2_7_cossin_run1.txt	J4(x)	A+B/i	0.98216876
J4x_3_7_cossin_run1.txt	J4(x)	A+B*sqrt(i)	0.96567629
J4x_4_7_cossin_run1.txt	J4(x)	A+B*log(i)^4	0.99839174
J5x_1_7_cossin_run1.txt	J5(x)	A+B*i	0.94206647
J5x_2_7_cossin_run1.txt	J5(x)	A+B/i	0.81446440
J5x_3_7_cossin_run1.txt	J5(x)	A+B*sqrt(i)	0.91441042
J5x_4_7_cossin_run1.txt	J5(x)	A+B*log(i)^4	0.93518480
ln_1_7_cossin_run1.txt	ln(x)	A+B*i	0.99929284
ln_2_7_cossin_run1.txt	ln(x)	A+B/i	0.99999979
ln_3_7_cossin_run1.txt	ln(x)	A+B*sqrt(i)	0.99965858
ln_4_7_cossin_run1.txt	ln(x)	A+B*log(i)^4	0.99963203
log10Gamma_1_7_cossin_run1.txt	log10Gamma(x)	A+B*i	0.99998943
log10Gamma_2_7_cossin_run1.txt	log10Gamma(x)	A+B/i	0.99996756
log10Gamma_3_7_cossin_run1.txt	log10Gamma(x)	A+B*sqrt(i)	0.99999962
log10Gamma_4_7_cossin_run1.txt	log10Gamma(x)	A+B*log(i)^4	0.99999143
log_1_7_cossin_run1.txt	log(x)	A+B*i	0.99945963
log_2_7_cossin_run1.txt	log(x)	A+B/i	0.99999982
log_3_7_cossin_run1.txt	log(x)	A+B*sqrt(i)	0.99989009
log_4_7_cossin_run1.txt	log(x)	A+B*log(i)^4	0.99998203
pwr10_1_7_cossin_run1.txt	10^x	A+B*i	1.00000000
pwr10_2_7_cossin_run1.txt	10^x	A+B/i	1.00000000
pwr10_3_7_cossin_run1.txt	10^x	A+B*sqrt(i)	1.00000000
pwr10_4_7_cossin_run1.txt	10^x	A+B*log(i)^4	1.00000000
sinh_1_7_cossin_run1.txt	sinh(x)	A+B*i	0.99980594
sinh_2_7_cossin_run1.txt	sinh(x)	A+B/i	1.00000000
sinh_3_7_cossin_run1.txt	sinh(x)	A+B*sqrt(i)	0.99999872
sinh_4_7_cossin_run1.txt	sinh(x)	A+B*log(i)^4	0.99996786
Si_1_7_cossin_run1.txt	Si(x)	A+B*i	0.89063623
Si_2_7_cossin_run1.txt	Si(x)	A+B/i	0.99026832

Filename	Function	gx(i,A,B)	Rsqr Adj
Si_3_7_cossin_run1.txt	Si(x)	A+B*sqrt(i)	0.92786373
Si_4_7_cossin_run1.txt	Si(x)	A+B*log(i)^4	0.90523350
tanh_1_7_cossin_run1.txt	tanh(x)	A+B*i	0.99999960
tanh_2_7_cossin_run1.txt	tanh(x)	A+B/i	1.00000000
tanh_3_7_cossin_run1.txt	tanh(x)	A+B*sqrt(i)	1.00000000
tanh_4_7_cossin_run1.txt	tanh(x)	A+B*log(i)^4	1.00000000
tan_1_7_cossin_run1.txt	tan(x)	A+B*i	1.00000000
tan_2_7_cossin_run1.txt	tan(x)	A+B/i	1.00000000
tan_3_7_cossin_run1.txt	tan(x)	A+B*sqrt(i)	1.00000000
tan_4_7_cossin_run1.txt	tan(x)	A+B*log(i)^4	1.00000000
tinv1_1_7_cossin_run1.txt	tinv(0.95,x)	A+B*i	0.83745122
tinv1_2_7_cossin_run1.txt	tinv(0.95,x)	A+B/i	0.60372303
tinv1_3_7_cossin_run1.txt	tinv(0.95,x)	A+B*sqrt(i)	0.70955237
tinv1_4_7_cossin_run1.txt	tinv(0.95,x)	A+B*log(i)^4	0.84908596
tinv2_1_7_cossin_run1.txt	tinv(0.975,x)	A+B*i	0.76011326
tinv2_2_7_cossin_run1.txt	tinv(0.975,x)	A+B/i	0.86284488
tinv2_3_7_cossin_run1.txt	tinv(0.975,x)	A+B*sqrt(i)	0.84225803
tinv2_4_7_cossin_run1.txt	tinv(0.975,x)	A+B*log(i)^4	0.79134441
trigamma_1_7_cossin_run1.txt	trigamma(x)	A+B*i	0.64439940
trigamma_2_7_cossin_run1.txt	trigamma(x)	A+B/i	0.47177074
trigamma_3_7_cossin_run1.txt	trigamma(x)	A+B*sqrt(i)	0.69878968
trigamma_4_7_cossin_run1.txt	trigamma(x)	A+B*log(i)^4	0.64232213

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