

## Appendix A. Files Required by Each Entry

The following tabulation shows for each user-callable procedure name in the MATH77 library the set of program files needed to support the use of that procedure name. A program file contains one or more Fortran program units. A program unit contains the code for one or more procedures (more than one if ENTRY statements are present). Files are listed in lower case, entries in upper case. If an entry uses an entry that is not in a MATH77 file, it is listed with the files, but in upper case.

The term “file” is used here as it is used in most operating systems. For the UNISYS (UNIVAC) system replace the term “file” with “element.”

Entry	Necessary files										
CAXPY	caxpy										
CCOEF	ccoef										
CCOPY	ccopy										
CDOTC	cdotc										
CDOTU	cdotu										
CGAM	amach	cgam	erfin	ermmsg	serm1	serv1					
CGECO	caxpy	cdotc	cgeco	cgefa	cscal	csscal	icamax	scasum			
CGED	amach	cged									
CGEFA	caxpy	cgefa	cscal	icamax							
CGEFS	caxpy	cgefa	cgefs	cgesld	cscal	erfin	ermmsg	icamax			
CGEFSC	caxpy	cdotc	cgeco	cgefa	cgefsc	cgesld	cscal	csscal	erfin	ermmsg	icamax
	scasum										
CGEI	caxpy	cgei	cscal	cswap	erfin	ermmsg					
CGESLD	caxpy	cgesld	erfin	ermmsg							
CGESLT	cdotc	cgeslt	erfin	ermmsg							
CPOLZ	amach	cpolz	erfin	ermmsg	scomqr						
CSCAL	cscal										
CSORT	csort										
CSORTP	csortp										
CSORTQ	csortp										
CSSCAL	csscal										
CSWAP	cswap										
CWOFZ	amach	cwofz	erfin	ermor	ermmsg	serv1					
D1MACH	amach										
DACCUM	amach	daccum	dhtcc	dnrm2	drotg	erfin	ermmsg	ierm1	ierv1		
DACOSH	amach	dasinh	derm1	derv1	erfin	ermmsg					
DACSCH	amach	dasinh	derm1	derv1	erfin	ermmsg					
DACTNH	amach	dasinh	derm1	derv1	erfin	ermmsg					
DASECH	amach	dasinh	derm1	derv1	erfin	ermmsg					
DASINH	amach	dasinh	derm1	derv1	erfin	ermmsg					
DASUM	dasum										
DATANH	amach	dasinh	derm1	derv1	erfin	ermmsg					
DAXPY	daxpy										
DBACC	amach	dbacc	dhtcc	dnrm2	erfin	ermmsg	ierm1	ierv1			
DBESJ0	amach	dbesj0	dbmp0	dcsevl	derm1	derv1	dinits	erfin	ermmsg	ierm1	ierv1
DBESJ1	amach	dbesj1	dbmp1	dcsevl	derm1	derv1	dinits	erfin	ermmsg	ierm1	ierv1
DBESJN	amach	dbesjn	dbesqp	derm1	derv1	dgamma	erfin	ermmsg	ierv1		
DBESY0	amach	dbesj0	dbesy0	dbmp0	dcsevl	derm1	derv1	dinits	erfin	ermmsg	ierm1
	ierv1										
DBESY1	amach	dbesj1	dbesy1	dbmp1	dcsevl	derm1	derv1	dinits	erfin	ermmsg	ierm1
	ierv1										
DBESYN	amach	dbesqp	dbesyn	derm1	derv1	dgamma	dlgama	erfin	ermor	ermmsg	ierv1
DBI0K0	amach	dbi0k0	dcsevl	derm1	derv1	dinits	erfin	ermmsg	ierm1	ierv1	
DBI1K1	amach	dbi1k1	dcsevl	derm1	derv1	dinits	erfin	ermmsg	ierm1	ierv1	
DBINOM	amach	dbinom	derm1	derv1	dgamma	dlgama	erfin	ermmsg	ierm1	ierv1	
DBSOL	dbsol	erfin	ermmsg	ierm1	ierv1						
DC2FIT	amach	dbacc	dbsol	dc2bas	dc2fit	derm1	derv1	dhtcc	dnrm2	dtrc2c	erfin
	ermmsg	ierm1	ierv1								

Entry	Necessary files											
DCDCHI	amach	dcdchi	dcsevl	derf	derm1	derv1	dgam1	dgami	dgamma	dgr17	dgr29	
	dinits	drcomp	drexp	drlog	dxparg	erfin	ermsg	ierm1	ierv1			
DCDNML	amach	dcdnml	dcsevl	derf	derm1	derv1	dinits	erfin	ermsg	ierm1	ierv1	
DCDPOI	amach	dcdpoi	dcsevl	derf	derm1	derv1	dgam1	dgami	dgamma	dgr17	dgr29	
	dinits	drcomp	drexp	drlog	dxparg	erfin	ermsg	ierm1	ierv1			
DCFT	deft	dfft	erfin	ermsg	ierm1	ierv1						
DCHOL	amach	dchol	ddot									
DCI	dci	dcpval	derm1	derv1	erfin	ermsg						
DCIN	dci	dcpval	derm1	derv1	erfin	ermsg						
DCKDER	amach	dckder	erfin	ermsg	ierm1	ierv1						
DCONCM	dconcm											
DCONMC	dconmc											
DCOPY	dcopy											
DCOS1	dcos1											
DCOSHM	dcoshm											
DCOSPX	amach	dcospx	derm1	derv1	erfin	ermsg						
DCOV2	dcov2	ddot	dswap	erfin	ermsg	ierm1	ierv1					
DCOV3	dcopy	dcov3	ddot	dscal	erfin	ermsg	ierm1	ierv1				
DCPDRV	dcpdrv	erfin	ermsg	ierm1	ierv1							
DCPINT	dcpint	erfin	ermsg	ierm1	ierv1							
DCPLTE	amach	dcplte	derm1	derv1	erfin	ermsg						
DCPLTK	amach	dcpltk	derm1	derv1	erfin	ermsg						
DCPVAL	dcpval											
DCSHMM	dcshmm											
DDASDB	amach	ddasdb	dmess	mess								
DDASLS	amach	dasum	daxpy	dcopy	ddasf	ddasls	ddot	dgbfa	dgbsl	dgefa	dgemv	
	dgesl	dscal	dswap	idamax	lsame	mess	xerbla					
DDASLX	amach	daxpy	dcopy	ddas1	ddasco	ddasdb	ddasf	ddasgh	ddasin	ddasj	ddaslv	
	ddaslx	ddasnm	ddastp	ddaswt	ddot	dgbfa	dgbsl	dgefa	dgesl	dmess	dnrm2	drot
	drotg	dscal	dswap	idamax	mess							
DDOT	ddot											
DE1	amach	dcsevl	dei	derm1	derv1	dinits	erfin	ermsg	ierm1	ierv1		
DEI	amach	dcsevl	dei	derm1	derv1	dinits	erfin	ermsg	ierm1	ierv1		
DELEFI	amach	delefi	derm1	derv1	dlnrel	erfin	ermsg					
DELP11	amach	delp11	derm1	derv1	drcval	drfval	drjval	erfin	ermsg			
DERF	amach	dcsevl	derf	derm1	derv1	dinits	erfin	ermsg	ierm1	ierv1		
DERFC	amach	dcsevl	derf	derm1	derv1	dinits	erfin	ermsg	ierm1	ierv1		
DERFCE	amach	dcsevl	derf	derm1	derv1	dinits	erfin	ermsg	ierm1	ierv1		
DERFCI	amach	derfi	derm1	derv1	erfin	ermsg						
DERFI	amach	derfi	derm1	derv1	erfin	ermsg						
DERM1	derm1	derv1	erfin	ermsg								
DERV1	derv1	erfin										
DEVUN	amach	devbh	devun	erfin	ermsg							
DEVVUN	amach	devbh	devvun	dnrm2	dscal	erfin	ermsg					
DFFT	dfft											
DFMIN	amach	dfmin	erfin	ermsg	ierm1	ierv1						
DFRENC	amach	dcospx	dcspxx	derm1	derv1	dfrenl	dsinpx	dsnp1xx	erfin	ermsg		
DFRENF	amach	dcospx	dcspxx	derm1	derv1	dfrenl	dsinpx	dsnp1xx	erfin	ermsg		
DFRENG	amach	dcospx	dcspxx	derm1	derv1	dfrenl	dsinpx	dsnp1xx	erfin	ermsg		
DFRENS	amach	dcospx	dcspxx	derm1	derv1	dfrenl	dsinpx	dsnp1xx	erfin	ermsg		
DGAM1	amach	derm1	derv1	dgam1	dgamma	erfin	ermsg					
DGAMI	amach	dcsevl	derf	derm1	derv1	dgam1	dgami	dgamma	dgr17	dgr29	dinits	
	drcomp	drexp	drlog	d1parg	erfin	ermsg	ierm1	ierv1				
DGAMIE	amach	dcsevl	derf	derm1	derv1	dgam1	dgami	dgamma	dgr17	dgr29	dinits	
	drcomp	drexp	drlog	d1parg	erfin	ermsg	ierm1	ierv1				
DGAMIK	amach	dcsevl	derf	derm1	derv1	dgam1	dgami	dgamma	dgr17	dgr29	dinits	
	drcomp	drexp	drlog	d1parg	erfin	ermsg	ierm1	ierv1				

Entry	Necessary files											
DGAMMA	amach	derm1	derv1	dgamma	erfin	ermsg						
DGECO	dasum	daxpy	ddot	dgeco	dgefa	dscal	idamax					
DGED	amach	dged										
DGEFA	daxpy	dgefa	dscal	idamax								
DGEFS	daxpy	dgefa	dgefs	dgesld	dscal	erfin	ermsg	idamax				
DGEFSC	dasum	daxpy	ddot	dgeco	dgefa	dgefsc	dgesld	dscal	erfin	ermsg	idamax	
DGEI	daxpy	dgei	dscal	dswap	erfin	ermsg						
DGESLD	daxpy	dgesld	erfin	ermsg								
DGESLT	ddot	dgeslt	erfin	ermsg								
DHERQL	dherql	dimql	erfin	ermsg	ierm1	ierv1						
DHFTI	amach	daxpy	ddot	dhfti	dhtcc	dhtgen	dnrm2	erfin	ermor	ermsg	ierm1	
	ierv1											
DHINT	dhint											
DHTCC	amach	dhtcc	dnrm2									
DHTGEN	amach	daxpy	ddot	dhtgen	dnrm2							
DILUP	amach	dilup	dmess	mess								
DILUPM	amach	dilup	dilupm	dmess	mess	optchk						
DILUPM	amach	dilupm	dmess	mess								
DINT1	amach	dint1	dinta	dintdl	dintdu	dintf	dintns	dinto	dintop	dintsm	dmess	
	mess											
DINTA	amach	dinta	dintdl	dintdu	dintf	dintns	dinto	dintsm	dmess	mess		
DINTM	amach	dcopy	dinta	dintdl	dintdu	dintf	dintm	dintma	dintns	dinto	dintop	
	dintsm	dmess	mess									
DINTMA	amach	dcopy	dinta	dintdl	dintdu	dintf	dintma	dintns	dinto	dintsm	dmess	
	mess											
DINTOP	amach	dintop	mess									
DIVA	amach	diva	dmess	mess	optchk	DIVAF	DIVAO					
DIVAA	amach	diva	dmess	mess	optchk	DIVAF	DIVAO					
DIVACO	amach	diva	dmess	mess	optchk	DIVAF	DIVAO					
DIVADB	amach	divadb	dmess	mess								
DIVAG	amach	diva	divag	dmess	dzero	mess	optchk					
DIVAIN	amach	diva	dmess	mess	optchk	DIVAF	DIVAO					
DIVAOP	amach	diva	dmess	mess	optchk	DIVAF	DIVAO					
DIVSET	amach	divset										
DJACG	amach	djacg										
DLASUM	dlasum											
DLESUM	dlesum											
DLGAMA	amach	derm1	derv1	dgamma	dlgama	erfin	ermsg					
DLNREL	dlnrel											
DMATP	amach	dmatp										
DMATPR	amach	dmatpr	dmess	mess								
DMESS	amach	dmess	mess									
DMLC01	amach	derv1	dmlc	erfin	ermor	ermsg	ierm1	ierv1	DMLCFG			
DMPDRV	dmpdrv	erfin	ermsg	ierm1	ierv1							
DMPINT	dmpint	erfin	ermsg	ierm1	ierv1							
DMPVAL	dmpval											
DNLA FB	amach	divset	dnla fb	drn2gb	i7copy	DCALCR						
DNLA FU	amach	divset	dnla fu	drn2g	DCALCR							
DNLAGB	amach	divset	dnla gb	drn2gb	i7copy	DCALCR	DCALCJ					
DNLAGU	amach	divset	dnla gu	drn2g	DCALCR	DCALCJ						
DNLSFB	amach	divset	dnlsfb	dq7rfh	drn2gb	drnsgb	i7copy	idsm	DCALCA			
DNLSFU	amach	divset	dnlsfu	dq7rfh	drn2g	drnsg	idsm					
DNLSGB	amach	divset	dnls gb	dq7rfh	drn2gb	drnsgb	i7copy					
DNLSGU	amach	divset	dnls gu	dq7rfh	drn2g	drnsg	DCALCA					
DNQSOL	amach	derv1	dnqsol	dnrm2	erfin	ermsg	ierm1	ierv1	DNQFJ			
DNRM2	amach	dnrm2										
DPASCL	dwcomp	erfin	ermsg	ierm1	ierv1							

Entry	Necessary files										
DPFIT	amach	derm1	derv1	dpfit	drotm	drotmg	erfin	errmsg	ierm1	ierv1	
DPLOT	amach	dmess	dplot	mess							
DPOLZ	amach	dpolz	erfin	errmsg							
DPOLZ2	amach	dpolz2	erfin	errmsg							
DPPNML	amach	derfi	derm1	derv1	dppnml	erfin	errmsg				
DPQUAD	derv1	dpquad	dsfind	erfin	errmsg	ierm1	ierv1				
DPRPL	dprpl										
DPRPL1	dprpl1	dprpl3	erfin	errmsg	ierm1	ierv1					
DPRPL2	dprpl2	dprpl3	erfin	errmsg	ierm1	ierv1					
DPSI	amach	dcsevl	derm1	derv1	dinits	dpsi	erfin	ermor	errmsg	ierm1	ierv1
DPSIE	amach	dcsevl	derm1	derv1	dinits	dpsi	erfin	ermor	errmsg	ierm1	ierv1
DPSIK	amach	dcsevl	derm1	derv1	dinits	dpsi	erfin	ermor	errmsg	ierm1	ierv1
DPVAL	derv1	dpval	dsfind	erfin	errmsg	ierm1	ierv1				
DRANE	drane	erfin	errmsg	ranpk1	ranpk2						
DRANG	drang	erfin	errmsg	ranpk1	ranpk2						
DRANGV	drang	drangv	erfin	errmsg	ranpk1	ranpk2					
DRANR	dranr	erfin	errmsg	ranpk1	ranpk2						
DRANU	dranu	erfin	errmsg	ranpk1	ranpk2						
DRANUA	erfin	errmsg	ranpk2								
DRANUS	erfin	errmsg	ranpk2								
DRCVAL	amach	derm1	derv1	drcval	erfin	errmsg					
DRDVAL	amach	derm1	derv1	drdval	erfin	errmsg					
DREXP	amach	drexpr									
DRFT	dfft	drft	erfin	errmsg	ierm1	ierv1					
DRFT1	dfft	drft1	erfin	errmsg	ierm1	ierv1					
DRFVAL	amach	derm1	derv1	drfval	erfin	errmsg					
DRJVAL	amach	derm1	derv1	drcval	drfval	drjval	erfin	errmsg			
DRLOG	amach	drlog									
DRLOG1	amach	drlog									
DROT	drot										
DROTG	drotg										
DROTM	drotm										
DROTMG	drotmg										
DSBASD	dsbasd	erfin	errmsg	ierm1	ierv1						
DSBASI	derv1	dsbasd	dsbasi	dsfind	erfin	errmsg	ierm1	ierv1			
DSCAL	dscal										
DSDIF	dsdif										
DSDOT	dsdot										
DSFIND	derv1	dsfind	erfin	errmsg	ierm1	ierv1					
DSFIT	amach	dbacc	dbsol	derv1	dhtcc	dnrm2	dsbasd	dsfit	erfin	errmsg	ierm1
DSFITC	amach	daxpy	dblse	dcopy	ddot	derv1	dhtcc	dnrm2	dranu	drotg	dsbasd
DSI	dsbasi	dsfind	dsfitc	dswap	erfin	ermor	errmsg	ierm1	ierv1	ranpk1	ranpk2
DSIN1	dcpval	dsi									
DSINHM	amach	dsinhm									
DSINPX	amach	derm1	derv1	dsinpx	erfin	errmsg					
DSORT	dsort										
DSORTP	dsortp										
DSORTQ	dsortp										
DSPGE	amach	dmess	dspge	mess							
DSQUAD	derv1	dsfind	dsquad	dsval	erfin	errmsg	ierm1	ierv1			
DSTAT1	dstat1										
DSTAT2	dprpl	dstat2									
DSTOP	derv1	dsdif	dsfind	dstop	dsvala	erfin	errmsg	ierm1	ierv1		
DSVA	amach	daxpy	dcopy	ddot	dhtcc	dhtgen	dnrm2	dprrsv	dqrbddrot	drotg	
	dsva	dsvdrs	dswap	erfin	ermor	errmsg	ierv1				

Entry	Necessary files									
DSVAL	derv1	dsfind	dsval	erfin	errmsg	ierm1	ierv1			
DSVALA	derv1	dsfind	dsvala	erfin	errmsg	ierm1	ierv1			
DSVDRS	amach	daxpy	dcopy	ddot	dhtcc	dhtgen	dnrm2	dqrbd	drot	drotg dsvdrs
	dswap	erfin	ermor	errmsg	ierv1					
DSWAP	dswap									
DSYMQ	dimql	dsymql	erfin	errmsg	ierm1	ierv1				
DTCST	dfft	dtcst	erfin	errmsg	ierm1	ierv1				
DTGFI	dtgc0	dtgc1	dtgext	dtgfi	dtgfn	dtgset	erfin	errmsg	ierm1	ierv1
DTGGRD	dsortp	dtggrd	dtgset							
DTGPD	drot	drotg	dtgpd	dtgset						
DTGPRG	dtgprg	dtgset								
DTGREC	dtgc0	dtgc1	dtgext	dtgfi	dtgfn	dtgrec	dtgset	erfin	errmsg	ierm1 ierv1
DUACOS	ducomp	erfin	errmsg	ierm1	ierv1					
DUASIN	ducomp	erfin	errmsg	ierm1	ierv1					
DUATAN	ducomp	erfin	errmsg	ierm1	ierv1					
DUATN2	ducomp	erfin	errmsg	ierm1	ierv1					
DUCOS	ducomp	erfin	errmsg	ierm1	ierv1					
DUCOSH	ducomp	erfin	errmsg	ierm1	ierv1					
DUDIF	ducomp	erfin	errmsg	ierm1	ierv1					
DUDIF1	ducomp	erfin	errmsg	ierm1	ierv1					
DUEXP	ducomp	erfin	errmsg	ierm1	ierv1					
DUGETN	ducomp	erfin	errmsg	ierm1	ierv1					
DULOG	ducomp	erfin	errmsg	ierm1	ierv1					
DUPRO	ducomp	erfin	errmsg	ierm1	ierv1					
DUPRO1	ducomp	erfin	errmsg	ierm1	ierv1					
DUPWRI	ducomp	erfin	errmsg	ierm1	ierv1					
DUQUO	ducomp	erfin	errmsg	ierm1	ierv1					
DUQUO1	ducomp	erfin	errmsg	ierm1	ierv1					
DUREV	dasum	daxpy	ddot	dgeco	dgefa	dgei	dscal	dswap	durev	erfin errmsg
	idamax									
DUSET	ducomp	erfin	errmsg	ierm1	ierv1					
DUSETN	ducomp	erfin	errmsg	ierm1	ierv1					
DUSIN	ducomp	erfin	errmsg	ierm1	ierv1					
DUSINH	ducomp	erfin	errmsg	ierm1	ierv1					
DUSQRT	ducomp	erfin	errmsg	ierm1	ierv1					
DUSUM	ducomp	erfin	errmsg	ierm1	ierv1					
DUSUM1	ducomp	erfin	errmsg	ierm1	ierv1					
DUTAN	ducomp	erfin	errmsg	ierm1	ierv1					
DUTANH	ducomp	erfin	errmsg	ierm1	ierv1					
DVECP	amach	dvecp								
DVECPR	amach	dmess	dvecpr	mess						
DWACOS	dwcomp	erfin	errmsg	ierm1	ierv1					
DWASIN	dwcomp	erfin	errmsg	ierm1	ierv1					
DWATAN	dwcomp	erfin	errmsg	ierm1	ierv1					
DWATN2	dwcomp	erfin	errmsg	ierm1	ierv1					
DWCHN	dwcomp	erfin	errmsg	ierm1	ierv1					
DWCOS	dwcomp	erfin	errmsg	ierm1	ierv1					
DWCOSH	dwcomp	erfin	errmsg	ierm1	ierv1					
DWDIF	dwcomp	erfin	errmsg	ierm1	ierv1					
DWDIF1	dwcomp	erfin	errmsg	ierm1	ierv1					
DWEXP	dwcomp	erfin	errmsg	ierm1	ierv1					
DWLOG	dwcomp	erfin	errmsg	ierm1	ierv1					
DWPRO	dwcomp	erfin	errmsg	ierm1	ierv1					
DWPRO1	dwcomp	erfin	errmsg	ierm1	ierv1					
DWPWRI	dwcomp	erfin	errmsg	ierm1	ierv1					
DWQUO	dwcomp	erfin	errmsg	ierm1	ierv1					
DWQUO1	dwcomp	erfin	errmsg	ierm1	ierv1					

Entry	Necessary files									
DWRCHN	dwcomp	erfin	errmsg	ierm1	ierv1					
DWSET	dwcomp	erfin	errmsg	ierm1	ierv1					
DWSIN	dwcomp	erfin	errmsg	ierm1	ierv1					
DWSINH	dwcomp	erfin	errmsg	ierm1	ierv1					
DWSQRT	dwcomp	erfin	errmsg	ierm1	ierv1					
DWSUM	dwcomp	erfin	errmsg	ierm1	ierv1					
DWSUM1	dwcomp	erfin	errmsg	ierm1	ierv1					
DWTAN	dwcomp	erfin	errmsg	ierm1	ierv1					
DWTANH	dwcomp	erfin	errmsg	ierm1	ierv1					
DXRK8	amach	dmess	dxrk8	dxrk8f	dxrk8o	mess				
DXRK8A	amach	dmess	dxrk8	dxrk8f	dxrk8o	mess				
DXRK8G	amach	dmess	dxrk8	dxrk8f	dxrk8g	dxrk8o	dzero	mess		
DZABS	dzabs									
DZERO	amach	dmess	dzero	mess						
ERFIN	erfin									
ERMOR	erfin	ermor								
ERMSET	erfin	errmsg								
ERMSG	erfin	errmsg								
EXSORT	exsort	insrtx	pvec	DATAOP	COMPAR					
GSORTP	gsortp	COMPAR								
I1MACH	amach									
ICAMAX	icamax									
IDAMAX	idamax									
IDRANP	amach	derm1	derv1	erfin	errmsg	idranp	ranpk1	ranpk2		
IDSTA1	idsta1									
IDSTA2	dprpl	idsta2								
IERM1	erfin	errmsg	ierm1	ierv1						
IERV1	erfin	ierv1								
IMATP	imatp									
IMATPR	imatpr	mess								
INSORT	insort	COMPAR								
ISAMAX	isamax									
ISORT	isort									
ISORTP	isortp									
ISORTQ	isortp									
ISRANP	amach	erfin	errmsg	isranp	ranpk1	ranpk2	serm1	serv1		
ISSTA1	issta1									
ISSTA2	issta2	sprpl								
IVECP	ivecp									
IVECPR	ivecpr	mess								
MESS	mess									
PVEC	pvec									
R1MACH	amach									
RAN1	erfin	errmsg	ranpk1	ranpk2						
RANGET	erfin	errmsg	ranpk2							
RANPUT	erfin	errmsg	ranpk1	ranpk2						
RANSIZ	erfin	errmsg	ranpk2							
RN2	erfin	errmsg	ranpk2							
SACCUM	amach	erfin	errmsg	ierm1	ierv1	saccum	shtcc	snrm2	srotg	
SACOSH	amach	erfin	errmsg	sasinh	serm1	serv1				
SACSCH	amach	erfin	errmsg	sasinh	serm1	serv1				
SACTNH	amach	erfin	errmsg	sasinh	serm1	serv1				
SASECH	amach	erfin	errmsg	sasinh	serm1	serv1				
SASINH	amach	erfin	errmsg	sasinh	serm1	serv1				
SASUM	sasum									
SATANH	amach	erfin	errmsg	sasinh	serm1	serv1				
SAXPY	saxpy									

Entry	Necessary files											
SBACC	amach	erfin	errmsg	ierm1	ierv1	sbacc	shtcc	snrm2				
SBESJ0	amach	erfin	errmsg	ierm1	ierv1	sbesj0	sbmp0	scsevl	serm1	serv1	sinits	
SBESJ1	amach	erfin	errmsg	ierm1	ierv1	sbesj1	sbmp1	scsevl	serm1	serv1	sinits	
SBESJN	amach	erfin	errmsg	ierv1	sbesjn	sbspq	serm1	serv1	sgamma			
SBESY0	amach	erfin	errmsg	ierm1	ierv1	sbesj0	sbesy0	sbmp0	scsevl	serm1	serv1	
	sinits											
SBESY1	amach	erfin	errmsg	ierm1	ierv1	sbesj1	sbesy1	sbmp1	scsevl	serm1	serv1	
	sinits											
SBESYN	amach	erfin	ermor	errmsg	ierv1	sbspq	sbesyn	serm1	serv1	sgamma	slgama	
SBI0K0	amach	erfin	errmsg	ierm1	ierv1	sbi0k0	scsevl	serm1	serv1	sinits		
SBI1K1	amach	erfin	errmsg	ierm1	ierv1	sbi1k1	scsevl	serm1	serv1	sinits		
SBINOM	amach	erfin	errmsg	ierm1	ierv1	sbinom	serm1	serv1	sgamma	slgama		
SBSOL	erfin	errmsg	ierm1	ierv1	sbsol							
SC2FIT	amach	erfin	errmsg	ierm1	ierv1	sbacc	sbsol	sc2bas	sc2fit	serm1	serv1	
	shtcc	snrm2	strc2c									
SCASUM	scasum											
SCDCHI	amach	erfin	errmsg	ierm1	ierv1	scdchi	scsevl	serf	serm1	serv1	sgam1	
	sgami	sgamma	sgr17	sgr29	sinits	srcomp	srexpr	srlog	sxparg			
SCDNML	amach	erfin	errmsg	ierm1	ierv1	scdnml	scsevl	serf	serm1	serv1	sinits	
SCDPOI	amach	erfin	errmsg	ierm1	ierv1	scdpoi	scsevl	serf	serm1	serv1	sgam1	
	sgami	sgamma	sgr17	sgr29	sinits	srcomp	srexpr	srlog	sxparg			
SCFT	erfin	errmsg	ierm1	ierv1	scft	sfft						
SCHOL	amach	schol	sdot									
SCI	erfin	errmsg	sci	scpval	serm1	serv1						
SCIN	erfin	errmsg	sci	scpval	serm1	serv1						
SCKDER	amach	erfin	errmsg	ierm1	ierv1	sckder						
SCNRM2	amach	scnrm2										
SCONCM	sconcm											
SCONMC	sconmc											
SCOPY	scopy											
SCOS1	scos1											
SCOSHM	scoshm											
SCOSPX	amach	erfin	errmsg	scospx	serm1	serv1						
SCOV2	erfin	errmsg	ierm1	ierv1	scov2	sdot	sswap					
SCOV3	erfin	errmsg	ierm1	ierv1	scopy	scov3	sdot	sscal				
SCPDRV	erfin	errmsg	ierm1	ierv1	scpdrv							
SCPINT	erfin	errmsg	ierm1	ierv1	scpint							
SCPLTE	amach	erfin	errmsg	scplte	serm1	serv1						
SCPLTK	amach	erfin	errmsg	scpltk	serm1	serv1						
SCPVAL	scpval											
SCSHMM	scshmm											
SDASDB	amach	mess	sdasdb	smess								
SDASLS	amach	isamax	lsame	mess	sasum	saxpy	scopy	sdasf	sdasls	sdot	sgbfa	
	sgbsl	sgefa	sgemv	sgesl	sscal	sswap	xerbla					
SDASLX	amach	isamax	mess	saxpy	scopy	sdasl	sdasco	sdasdb	sdasf	sdasgh	sdasin	
	sdasj	sdaslv	sdaslx	sdasnm	sdastp	sdaswt	sdot	sgbfa	sgbsl	sgefa	sgesl	smess
	snrm2	srot	srotg	sscal	sswap							
SDOT	sdot											
SDSDOT	sdsdot											
SE1	amach	erfin	errmsg	ierm1	ierv1	scsevl	sei	serm1	serv1	sinits		
SEI	amach	erfin	errmsg	ierm1	ierv1	scsevl	sei	serm1	serv1	sinits		
SELEFI	amach	erfin	errmsg	selefi	serm1	serv1	slnrel					
SELP11	amach	erfin	errmsg	selp11	serm1	serv1	srcval	srflval	srjval			
SERF	amach	erfin	errmsg	ierm1	ierv1	scsevl	serf	serm1	serv1	sinits		
SERFC	amach	erfin	errmsg	ierm1	ierv1	scsevl	serf	serm1	serv1	sinits		
SERFCE	amach	erfin	errmsg	ierm1	ierv1	scsevl	serf	serm1	serv1	sinits		
SERFCI	amach	erfin	errmsg	serfi	serm1	serv1						

Entry	Necessary files												
SERFI	amach	erfin	errmsg	serfi	serm1	serv1							
SERM1	erfin	errmsg	serm1	serv1									
SERV1	erfin	serv1											
SEVUN	amach	erfin	errmsg	sevbh	sevun								
SEVVUN	amach	erfin	errmsg	sevbh	sevvun	snrm2	sscal						
SFFT	sfft												
SFMIN	amach	erfin	errmsg	ierm1	ierv1	sfmin							
SFRENC	amach	erfin	errmsg	scospx	scspxx	serm1	serv1	sfrenl	ssinpx	ssnpxx			
SFRENF	amach	erfin	errmsg	scospx	scspxx	serm1	serv1	sfrenl	ssinpx	ssnpxx			
SFRENG	amach	erfin	errmsg	scospx	scspxx	serm1	serv1	sfrenl	ssinpx	ssnpxx			
SFRENS	amach	erfin	errmsg	scospx	scspxx	serm1	serv1	sfrenl	ssinpx	ssnpxx			
SGAM1	amach	erfin	errmsg	serm1	serv1	sgam1	sgamma						
SGAMI	amach	erfin	errmsg	ierm1	ierv1	scsevl	serf	serm1	serv1	sgam1	sgami		
	sgamma	sgr17	sgr29	sinits	srcomp	srexp	srlog	exparg					
SGAMIE	amach	erfin	errmsg	ierm1	ierv1	scsevl	serf	serm1	serv1	sgam1	sgami		
	sgamma	sgr17	sgr29	sinits	srcomp	srexp	srlog	exparg					
SGAMIK	amach	erfin	errmsg	ierm1	ierv1	scsevl	serf	serm1	serv1	sgam1	sgami		
	sgamma	sgr17	sgr29	sinits	srcomp	srexp	srlog	exparg					
SGAMMA	amach	erfin	errmsg	serm1	serv1	sgamma							
SGECO	isamax	sasum	saxpy	sdot	sgeco	sgefa	sscal						
SGED	amach	sged											
SGEFA	isamax	saxpy	sgefa	sscal									
SGEFS	erfin	errmsg	isamax	saxpy	sgefa	sgefs	sgesld	sscal					
SGEFSC	erfin	errmsg	isamax	sasum	saxpy	sdot	sgeco	sgefa	sgefsc	sgesld	sscal		
SGEI	erfin	errmsg	saxpy	sgei	sscal	sswap							
SGESLD	erfin	errmsg	saxpy	sgesld									
SGESLT	erfin	errmsg	sdot	sgeslt									
SHERQL	erfin	errmsg	ierm1	ierv1	sherql	simql							
SHFTI	amach	erfin	ermor	errmsg	ierm1	ierv1	saxpy	sdot	shfti	shtcc	shtgen		
	snrm2												
SHINT	shint												
SHTCC	amach	shtcc	snrm2										
SHTGEN	amach	saxpy	sdot	shtgen	snrm2								
SILUP	amach	mess	silup	smess									
SILUPM	amach	mess	optchk	silup	silupm	smess							
SILUPM	amach	mess	silupm	smess									
SINT1	amach	mess	sint1	sinta	sintdl	sintdu	sintf	sintns	sinto	sintop	sintsm		
	smess												
SINTA	amach	mess	sinta	sintdl	sintdu	sintf	sintns	sinto	sintsm	smess			
SINTM	amach	mess	scopy	sinta	sintdl	sintdu	sintf	sintm	sintma	sintns	sinto		
	sintop	sintsm	smess										
SINTMA	amach	mess	scopy	sinta	sintdl	sintdu	sintf	sintma	sintns	sinto	sintsm		
	smess												
SINTOP	amach	mess	sintop										
SIVA	amach	mess	optchk	siva	smess	SIVAF	SIVAO						
SIVAA	amach	mess	optchk	siva	smess	SIVAF	SIVAO						
SIVACO	amach	mess	optchk	siva	smess	SIVAF	SIVAO						
SIVADB	amach	mess	sivadb	smess									
SIVAG	amach	mess	optchk	siva	sivag	smess	szero						
SIVAIN	amach	mess	optchk	siva	smess	SIVAF	SIVAO						
SIVAOP	amach	mess	optchk	siva	smess	SIVAF	SIVAO						
SIVSET	amach	sivset											
SJACG	amach	sjacg											
SLASUM	slasum												
SLESUM	slesum												
SLGAMA	amach	erfin	errmsg	serm1	serv1	sgamma	slgama						
SLNREL	slnrel												



Entry	Necessary files											
SMATP	amach	smatp										
SMATPR	amach	mess	smatpr	smess								
SMESS	amach	mess	smess									
SMLC01	amach	erfin	ermor	ermmsg	ierm1	ierv1	serv1	smlc	SMLCFG			
SMPDRV	erfin	ermmsg	ierm1	ierv1	smpdrv							
SMPINT	erfin	ermmsg	ierm1	ierv1	smpint							
SMPVAL	smpval											
SNLAFB	amach	i7copy	sivset	snlafb	srn2gb	SCALCR						
SNLAFU	amach	sivset	snlafu	srn2g	SCALCR							
SNLAGB	amach	i7copy	sivset	snlagb	srn2gb	SCALCR	SCALCJ					
SNLAGU	amach	sivset	snlagu	srn2g	SCALCR	SCALCJ						
SNLSFB	amach	i7copy	idsm	sivset	snlsfb	sq7rfh	srn2gb	srnsgb	SCALCA			
SNLSFU	amach	idsm	sivset	snlsfu	sq7rfh	srn2g	srnsg					
SNLSGB	amach	i7copy	sivset	snlsgb	sq7rfh	srn2gb	srnsgb					
SNLSGU	amach	sivset	snlsgu	sq7rfh	srn2g	srnsg	SCALCA					
SNQSOL	amach	erfin	ermmsg	ierm1	ierv1	serv1	snqsol	snrm2	SNQFJ			
SNRM2	amach	snrm2										
SPASCL	erfin	ermmsg	ierm1	ierv1	swcomp							
SPFIT	amach	erfin	ermmsg	ierm1	ierv1	serm1	serv1	spfit	srotm	srotmg		
SPLOT	amach	mess	smess	splot								
SPOLZ	amach	erfin	ermmsg	spolz								
SPOLZ2	amach	erfin	ermmsg	spolz2								
SPPNML	amach	erfin	ermmsg	serfi	serm1	serv1	sppnml					
SPQUAD	erfin	ermmsg	ierm1	ierv1	serv1	spquad	ssfind					
SPRPL	sprpl											
SPRPL1	erfin	ermmsg	ierm1	ierv1	sprpl1	sprpl3						
SPRPL2	erfin	ermmsg	ierm1	ierv1	sprpl2	sprpl3						
SPSI	amach	erfin	ermor	ermmsg	ierm1	ierv1	scsevl	serm1	serv1	sinits	spsi	
SPSIE	amach	erfin	ermor	ermmsg	ierm1	ierv1	scsevl	serm1	serv1	sinits	spsi	
SPSIK	amach	erfin	ermor	ermmsg	ierm1	ierv1	scsevl	serm1	serv1	sinits	spsi	
SPVAL	erfin	ermmsg	ierm1	ierv1	serv1	spval	ssfind					
SRANE	erfin	ermmsg	ranpk1	ranpk2	srane							
SRANG	erfin	ermmsg	ranpk1	ranpk2	srang							
SRANGV	erfin	ermmsg	ranpk1	ranpk2	srang	srangv						
SRANR	erfin	ermmsg	ranpk1	ranpk2	srandr							
SRANU	erfin	ermmsg	ranpk1	ranpk2	sranu							
SRANUA	erfin	ermmsg	ranpk2									
SRANUS	erfin	ermmsg	ranpk2									
SRCVAL	amach	erfin	ermmsg	serm1	serv1	srcval						
SRDVAL	amach	erfin	ermmsg	serm1	serv1	srldval						
SREXP	amach	srexp										
SRFT	erfin	ermmsg	ierm1	ierv1	sfft	srft						
SRFT1	erfin	ermmsg	ierm1	ierv1	sfft	srft1						
SRFVAL	amach	erfin	ermmsg	serm1	serv1	srftval						
SRJVAL	amach	erfin	ermmsg	serm1	serv1	srcval	srftval	srjval				
SRLOG	amach	srlog										
SRLOG1	amach	srlog										
SROT	srot											
SROTG	srotg											
SROTM	srotm											
SROTMG	srotmg											
SSBASD	erfin	ermmsg	ierm1	ierv1	ssbasd							
SSBASI	erfin	ermmsg	ierm1	ierv1	serv1	ssbasd	ssbasi	ssfind				
SSCAL	sscal											
SSDIF	ssdif											
SSFIND	erfin	ermmsg	ierm1	ierv1	serv1	ssfind						
SSFIT	amach	erfin	ermmsg	ierm1	ierv1	sbacc	sbsol	serv1	shtcc	snrm2	ssbasd	

Entry	Necessary files										
	ssfit										
SSFITC	amach	erfin	ermor	ermmsg	ierm1	ierv1	ranpk1	ranpk2	saxpy	sblse	scopy
	sdot	serv1	shtcc	snrm2	sranu	srotg	ssbasd	ssbasi	ssfind	ssfitc	sswap
SSI	scpval	ssi									
SSIN1	amach	ssin1									
SSINHM	amach	ssinhm									
SSINPX	amach	erfin	ermmsg	serm1	serv1	ssinpx					
SSORT	ssort										
SSORTP	ssortp										
SSORTQ	ssortp										
SSPGE	amach	mess	smess	sspge							
SSQUAD	erfin	ermmsg	ierm1	ierv1	serv1	ssfind	ssquad	ssval			
SSTAT1	sstat1										
SSTAT2	sprpl	sstat2									
SSTOP	erfin	ermmsg	ierm1	ierv1	serv1	ssdif	ssfind	sstop	ssvala		
SSVA	amach	erfin	ermor	ermmsg	ierv1	saxpy	scopy	sdot	shtcc	shtgen	snrm2
	sprtsv	sqrbd	srot	srotg	ssva	ssvdrs	sswap				
SSVAL	erfin	ermmsg	ierm1	ierv1	serv1	ssfind	ssval				
SSVALA	erfin	ermmsg	ierm1	ierv1	serv1	ssfind	ssvala				
SSVDRS	amach	erfin	ermor	ermmsg	ierv1	saxpy	scopy	sdot	shtcc	shtgen	snrm2
	sqrbd	srot	srotg	ssvdrs	sswap						
SSWAP	sswap										
SSYMQQL	erfin	ermmsg	ierm1	ierv1	simql	ssymql					
STCST	erfin	ermmsg	ierm1	ierv1	sfft	stcst					
STGFI	erfin	ermmsg	ierm1	ierv1	stgc0	stgc1	stgext	stgfi	stgfnd	stgset	
STGGRD	ssortp	stggrd	stgset								
STGPD	srot	srotg	stgpd	stgset							
STGPRG	stgprg	stgset									
STGREC	erfin	ermmsg	ierm1	ierv1	stgc0	stgc1	stgext	stgfi	stgfnd	stgrec	stgset
SUACOS	erfin	ermmsg	ierm1	ierv1	sucomp						
SUASIN	erfin	ermmsg	ierm1	ierv1	sucomp						
SUATAN	erfin	ermmsg	ierm1	ierv1	sucomp						
SUATN2	erfin	ermmsg	ierm1	ierv1	sucomp						
SUCOS	erfin	ermmsg	ierm1	ierv1	sucomp						
SUCOSH	erfin	ermmsg	ierm1	ierv1	sucomp						
SUDIF	erfin	ermmsg	ierm1	ierv1	sucomp						
SUDIF1	erfin	ermmsg	ierm1	ierv1	sucomp						
SUEXP	erfin	ermmsg	ierm1	ierv1	sucomp						
SUGETN	erfin	ermmsg	ierm1	ierv1	sucomp						
SULOG	erfin	ermmsg	ierm1	ierv1	sucomp						
SUPRO	erfin	ermmsg	ierm1	ierv1	sucomp						
SUPRO1	erfin	ermmsg	ierm1	ierv1	sucomp						
SUPWRI	erfin	ermmsg	ierm1	ierv1	sucomp						
SUQUO	erfin	ermmsg	ierm1	ierv1	sucomp						
SUQUO1	erfin	ermmsg	ierm1	ierv1	sucomp						
SUREV	erfin	ermmsg	isamax	sasum	saxpy	sdot	sgeco	sgefa	sgei	sscal	sswap
	surev										
SUSET	erfin	ermmsg	ierm1	ierv1	sucomp						
SUSETN	erfin	ermmsg	ierm1	ierv1	sucomp						
SUSIN	erfin	ermmsg	ierm1	ierv1	sucomp						
SUSINH	erfin	ermmsg	ierm1	ierv1	sucomp						
SUSQRT	erfin	ermmsg	ierm1	ierv1	sucomp						
SUSUM	erfin	ermmsg	ierm1	ierv1	sucomp						
SUSUM1	erfin	ermmsg	ierm1	ierv1	sucomp						
SUTAN	erfin	ermmsg	ierm1	ierv1	sucomp						
SUTANH	erfin	ermmsg	ierm1	ierv1	sucomp						
SVECP	amach	svecp									

Entry	Necessary files							
SVECPR	amach	mess	smess	svecpr				
SWACOS	erfin	errmsg	ierm1	ierv1	swcomp			
SWASIN	erfin	errmsg	ierm1	ierv1	swcomp			
SWATAN	erfin	errmsg	ierm1	ierv1	swcomp			
SWATN2	erfin	errmsg	ierm1	ierv1	swcomp			
SWCHN	erfin	errmsg	ierm1	ierv1	swcomp			
SWCOS	erfin	errmsg	ierm1	ierv1	swcomp			
SWCOSH	erfin	errmsg	ierm1	ierv1	swcomp			
SWDIF	erfin	errmsg	ierm1	ierv1	swcomp			
SWDIF1	erfin	errmsg	ierm1	ierv1	swcomp			
SWEXP	erfin	errmsg	ierm1	ierv1	swcomp			
SWLOG	erfin	errmsg	ierm1	ierv1	swcomp			
SWPRO	erfin	errmsg	ierm1	ierv1	swcomp			
SWPRO1	erfin	errmsg	ierm1	ierv1	swcomp			
SWPWRI	erfin	errmsg	ierm1	ierv1	swcomp			
SWQUO	erfin	errmsg	ierm1	ierv1	swcomp			
SWQUO1	erfin	errmsg	ierm1	ierv1	swcomp			
SWRCHN	erfin	errmsg	ierm1	ierv1	swcomp			
SWSET	erfin	errmsg	ierm1	ierv1	swcomp			
SWSIN	erfin	errmsg	ierm1	ierv1	swcomp			
SWSINH	erfin	errmsg	ierm1	ierv1	swcomp			
SWSQRT	erfin	errmsg	ierm1	ierv1	swcomp			
SWSUM	erfin	errmsg	ierm1	ierv1	swcomp			
SWSUM1	erfin	errmsg	ierm1	ierv1	swcomp			
SWTAN	erfin	errmsg	ierm1	ierv1	swcomp			
SWTANH	erfin	errmsg	ierm1	ierv1	swcomp			
SXRK8	amach	mess	smess	sxrk8	sxrk8f	sxrk8o		
SXRK8A	amach	mess	smess	sxrk8	sxrk8f	sxrk8o		
SXRK8G	amach	mess	smess	sxrk8	sxrk8f	sxrk8g	sxrk8o	szero
SZERO	amach	mess	smess	szero				
ZCOEF	zcoef							
ZDIF	zdif							
ZGAM	amach	derv1	derv1	erfin	errmsg	zgam		
ZPOLZ	amach	dcomqr	dzabs	erfin	errmsg	zpolz	zquo	zsqrtr
ZPRO	zpro							
ZQUO	zquo							
ZSQRTX	zsqrtr							
ZSUM	zsum							
ZWOFZ	amach	derv1	erfin	ermor	errmsg	zwofz		