

SOURCE PROGRAM INPUT AND TRANSLATION

000005

20215	0200001		SUB XR01			02510
20216	2514001		BMI			02520
20217	2600241		BRU INPUT8			02530
20220	0642726		LDX ZERO	2		02540
20221	2600142		BRU LIST3-1			02550
20222	0005023	LIST11	LDA SAVLEN		ENTERED AFTER FIRST END INSTRUCTION	02560
20223	2512006		SLA 6		COMPUTE STARTING LOCATION OF TESTER	02570
20224	0105014		ADD ULOC			02580
20225	0305005		STA IR3		SET UP INDEXES FOR LIST	02590
20226	2504022		LDO			02600
20227	0305004		STA IR			02610
20230	2600204		BRU LIST1		CONTINUE PROCESSING INSTRUCTIONS	02620
20231	1005012	LISTER	DLD ERMOV			02630
20232	2427621		MOV LAB11			02640
20233	0005012		LDA ERMOV			02650
20234	0103171		ADD N7			02660
20235	0305012		STA ERMOV			02670
20236	0003153		LDA ONE			02680
20237	0307135		STA ER			02690
20240	2605064		BRU RUN			02700
20241	1005012	INPUT8	DLD ERMOV			02710
20242	2427655		MOV LAB15			02720
20243	2605061		BRU ERR30			02730
			REM		*****	02740
			REM		TRANS IS THE SUBROUTINE USED BY LIST	02750
			REM		TO PERFORM CHARACTER TRANSLATION	02760
			REM		CHARACTERS ARE TRANSLATED THROUGH TABLE	02770
			REM		\$2.	02780
20244	0004720	TRANS	LDA APP			02790
20245	2514001		BMI			02800
20246	2600301		BRU TRANS			02810
20247	1725035		STX T+5	1	Save I1	02820
20250	0625030		LDX T	1	Load I1 from T	02830
20251	0023262		LDA \$2	1	Take look up character	02840
20252	0625035		LDX T+5	1	Rest I1	02850
20253	2516001		BPL			02860
20254	2620001		BRU 1	1	char + -return	02870
20255	0103205		ADD N12		add 12.0	02880
20256	2514002		BZE		=0 not used	02890
20257	2600274		BRU TRANS			02900
20260	0103223		ADD N19		add 19	02910
20261	2514002		BZE			02920
20262	2600173		BRU LIST6			02930
20263	0103207		ADD N14			02940
20264	2514002		BZE			02950
20265	2600267		BRU **2			02960
20266	2620003		BRU 3	1		02970
20267	0625031		LDX T+1	1		02980
20270	2600231		BRU LISTER			02990
20271	0625031	TRANS	LDX T+1	1		03000
20272	1765005		STX IR3	3		03010
20273	2602136		BRU LETER			03020
20274	0002725	TRANS	LDA MIN			03030
20275	0264720		SUB APP			03040

JRCE PROGRAM INPUT AND TRANSLATION

000006

APP = -1-APP

Address	Label	Instruction	Comments	Hex
20276	0304720	STA APP		03050
20277	0003205	LDA N12		03060
20300	2620001	BRU 1	1	03070
20301	0005030	TRAN2: LDA T		03080
20302	2103205	CAB N12		03090
20303	2620001	BRU 1	1	03100
20304	2600317	BRU TRAN4		03110
20305	2103244	CAB N28		03120
20306	2620001	BRU 1	1	03130
20307	2600274	BRU TRANS		03140
20310	2103247	CAB N31		03150
20311	2620001	BRU 1	1	03160
20312	2600271	BRU TRAN6		03170
20313	2103462	CAB N60		03180
20314	2620001	BRU 1	1	03190
20315	2600321	BRU TRANS		03200
20316	2620001	BRU 1	1	03210
20317	0003357	TRAN4: LDA N61		03220
20320	2620001	BRU 1	1	03230
20321	0003360	TRANS: LDA N62		03240
20322	2620001	BRU 1	1	03250
		REM *****	***	03260
		REM *****	*****	03270
		REM *****	THE COMP ROUTINE	03280
		REM *****	CHECKS FOR LINE NO.S OVER 6 DIGITS	03290
		REM *****	BUILDS THE F-TABLE AND CHECKS FOR TOO	03300
		REM *****	MANY LINES IN PROGRAM - 241.	03310
		REM *****	PLACES FIRST LETTER OF INSTRUCTION IN	03320
		REM *****	XR3 IN PREPARATION FOR INDEXED BRANCH	03330
		REM *****	PLACES SECOND LETTER OF INSTRUCTION IN	03340
		REM *****	A REGISTER	03350
		REM *****	XREG USE	03360
		REM *****	XR0 - NOT USED	03370
		REM *****	XR1 - P-REGION POINTER	03380
		REM *****	XR2 - L-REGION POINTER	03390
		REM *****	XR3 - INDEXED BRANCH TO G-JUMP TABLE	03400
20323	0642726	COMP: LDX ZERO	2	BAS03410
20324	0764372	SPB INST	3	BAS03420
20325	2604416	BRU INST8		03430
20326	0417777	BXL 1	0	03440
20327	2600337	BRU COMPI		03450
20330	2504004	LDA INST		03460
20331	0005024	LDA ENDF		03470
20332	2514001	BMI #21		03480
20333	2600337	BRU #4	5	03490
20334	0557773	BXH 5	2	03500
20335	2604416	BRU INST8		03510
20336	2504001	LAD		03520
20337	0557772	COMP: BXH #0	2	03530
20340	2604416	BRU INST8		03540
20341	0665000	LDX ENDF	3	03550
20342	0365200	STA P#1	3	03560
20343	0327725	STA R#1	1	03570
20344	0000001	LDA 1		03580

RUN-TIME UPPER MEM, ARITHMETIC SUBROUTINES

000073

26042	2512203	SLD 3			BAS33360
26043	2513237	DNO 31			BAS33370
26044	2511010	SRD 8			BAS33380
26045	1307070	DST /2202		ANS	BAS33390
26046	0007100	LDA /2210			BAS33400
26047	2516001	BPL			BAS33410
26050	2606055	BRU /2234			BAS33420
26051	1001402	DLA /2209		IF NEG G NEGATE ANS	BAS33430
26052	1207070	DSU /2202			BAS33440
26053	2002707	EXT /2212			BAS33450
26054	1307070	DST /2202			BAS33460
26055	0000000	/2234 LDA 000			BAS33470
26056	0203012	SUB /2235			BAS33480
26057	2512013	SLA 11			BAS33490
26060	2307070	ORY /2202		PUT EXP ON ANS	BAS33500
26061	0001402	LDA /2209		SET UP FOR NORMAL RETURN	BAS33510
26062	0607077	/2236 LDX /2208 0			BAS33520
26063	3100010	SET NFLPOINT			BAS33530
26064	3500005	CQX			BAS33540
26065	0647076	LDX /2207 2			BAS33550
26066	3007070	FLD /2202			BAS33560
26067	2514003	BOV		TURN OFF OVERFLOW	BAS33570
26070	2606071	BRU ++1			BAS33580
26071	2512001	SLA 1		URNS ON OVERFLOW IF THERE IS AN ERROR	BAS33590
26072	2620001	BRU 1 1			BAS33600
26073	2504522	/2214 NEG		NEG EXP	BAS33610
26074	0300002	STA 2			BAS33620
26075	0557767	BXH 9 2		IS EXPONENT LESS THAN -9	BAS33630
26076	2606106	BRU /2238		EXP TOO SMALL	BAS33640
26077	1007070	DLA /2202			BAS33650
26100	2512206	SLD 6			BAS33660
26101	2551000	SRD 0 2			BAS33670
26102	1307070	DST /2202		LINE UP FRACTION PART	BAS33680
26103	0001402	LDA /2209		PUT ZERO IN FOR QUAD COUNT	BAS33690
26104	0307101	STA /2211			BAS33700
26105	2605773	BRU /2219			BAS33710
26106	1007072	/2238 DLD /2205		ANS IS ARG FOR SMALL EXP	BAS33720
26107	1307070	/2217 DST /2202			BAS33730
26110	2606062	BRU /2236		RETURN	BAS33740
		REM		LAST CARD = CD225D2.008	BAS33750
		REM			BAS33760
		REM			BAS33770
		REM			BAS33780
		REM			BAS33790
		REM			BAS33800
		REM			BAS33810
26111	0627070	EXPSUB LDX B 1			BAS33820
26112	3307070	FST /6105			BAS33830
26113	2514722	BAR BZE 7			BAS33840
26114	2606133	BRU /6100		ARGUMENT IS 0	BAS33850
26115	3201400	FSU FONE			BAS33860
26116	2516722	BAR BNZ 7			BAS33870
26117	2606122	BRU ++3			BAS33880
26120	3003050	FLD /6111		ARGUMENT IS 1	BAS33890
26121	2620001	BRU 1 1			BAS33900

CD225D2.012 - FL-PT EXPONENTIAL - AAU,
 GENERAL ELECTRIC CO COMP DEPT, PHX,
 COR 4 APR 63,
 179 SOURCE-LANGUAGE CARDS.

*Should check
 down for
 3176.133*

*Set = 0
 part b must be*

9
 54
 41
 4
 108

UPPER MEM. ARITHMETIC SUBROUTINES

000074

22	3007070	FLD /6105		33900
23	3100002	MAQ	A	33910
24	3503042	FMP /6113	MULTIPLY BY 1/LN2	33920
25	3307070	FST /6105		33930
26	2606142	BRU /6101		33940
27	0627070	EEXP2 LDX B	1	33950
30	3307070	FST /6105		33960
31	2516722	BAR BNZ	7	33970
32	2606135	BRU ++3		33980
33	3001400	/6100 FLD FONE	ARGUMENT IS 0	33990
34	2620001	BRU 1	1	34000
35	3201400	FSU FONE		34010
36	2516722	BAR BNZ	7	34020
37	2606142	BRU ++3		34030
40	3003046	FLD /6118	ARGUMENT IS 1	34040
41	2620001	BRU 1	1	34050
42	1727072	/6101 STX /6134	1	34060
43	0007070	LDA /6105	peel off exponent of arg.	34070
44	2510013	SRA 11		34080
45	0307102	STA /6119	(+9) get magnitude of mantissa of arg.	34090
46	1007070	DLN /6105		34100
47	2512210	SLD 8		34110
48	1307074	DST /6109		34120
51	2516001	BPL		34130
52	2606156	BRU ++4		34140
53	1001402	DLN /6104	=0	34150
54	1207074	DSU /6109		34160
55	1307074	DST /6109		34170
56	0007102	LDA /6119	test for pos. exponent of arg.	34180
57	2516001	BPL		34190
60	2606173	BRU /6124		34200
61	2504522	NEG		34210
62	0300003	STA XR03		34220
63	0103040	ADD /6121	-25	34230
64	2516001	BPL		34240
65	2606133	BRU /6100	LDA /6105 ANSWER IS CLOSE TO 1	34250
66	2504002	LDZ	CASE MAXNEG	34260
67	0307102	STA /6119	BRU * +3	34270
68	1007074	DLN /6109	BRU /6100	34280
69	2571000	SRD 0	3 BRU /6100	34290
72	2606206	BRU /6126		34300
73	0003041	/6124 LDA /6136	= 8 exponent of arg is +	34310
74	0207102	SUB /6119	test for > 8	34320
75	2514001	BMI		34330
76	2606240	BRU /6132	BRU if > 8 to exit	34340
77	0667102	LDX /6119	= exp of arg	34350
80	0007074	LDA /6109	= mag of arg	34360
801	2504006	MAQ		34370
802	2572200	SLD 0	3 BEE TSTMAX LDA /6109	34380
803	0307102	STA /6119	EXT FRSTB	34390
804	1007074	DLN /6109	SUB 377	34400
805	2572200	SLD 0	3 BEE /6132	34410
806	0726242	/6126 SPB /6127	1	34420
807	1307074	DST /6109		34430

(OK)

-177.43 =
00 000 100 110 100 111 010
10 010

-177.43 = (had)
00 000 100 110 100 111 010
10 100 01

-176.79 =
00 000 100 110 11001 10
11 ...

00,000,100,000,000,000