

IDENTIFICATION

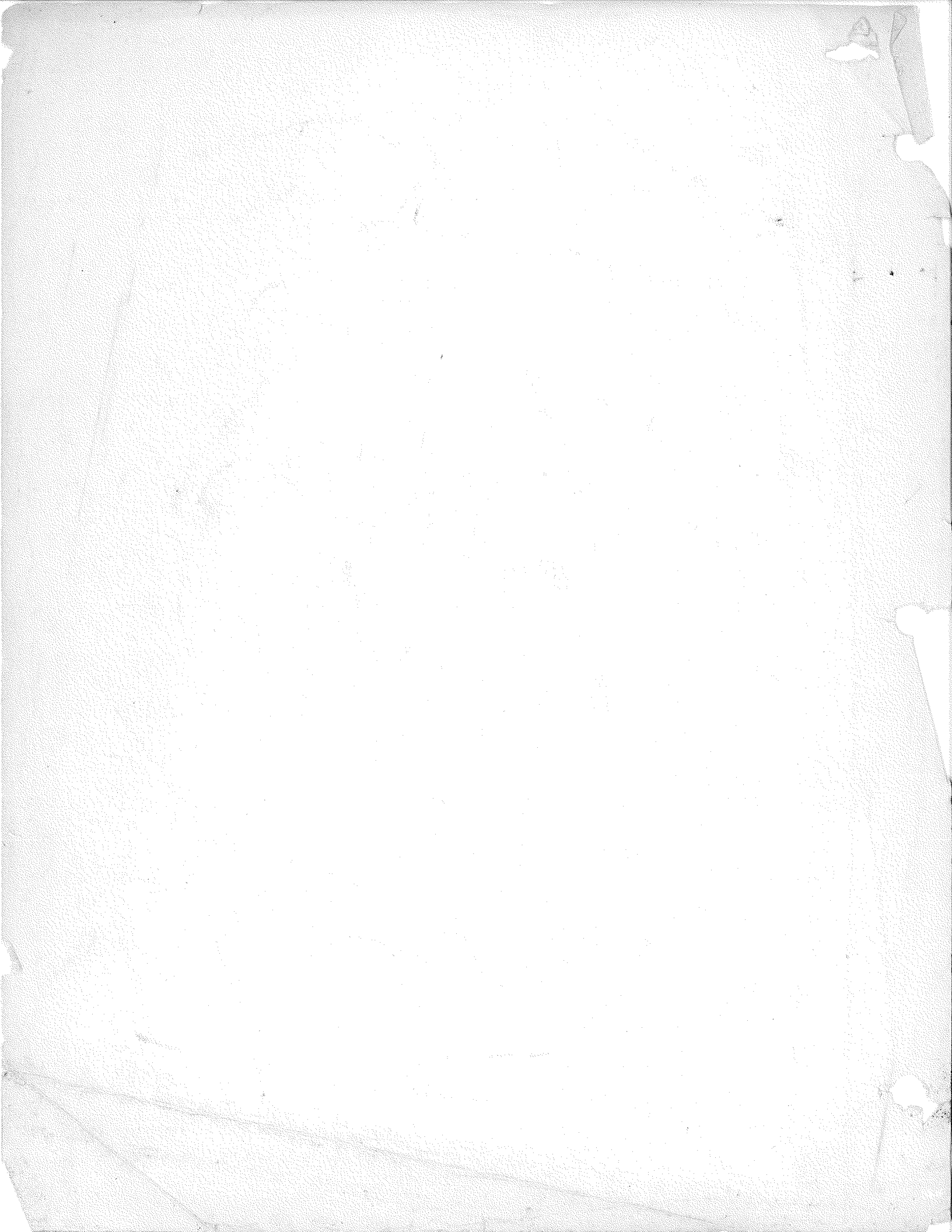
Product Code: MAINDEC-9A-D01A-D

Product Name: Instruction Test Part I

Date: November 30, 1967

Maintainer: Diagnostic Group

Author: M. Horowitz



1. ABSTRACT

All operate group instructions and the following memory reference instructions are tested: LAC, TAD, ADD, SAD, and XOR. Individual error halts are used to describe the failing tests.

2. REQUIREMENTS

2.1 Equipment

PDP-9, 7, 4

2.2 Storage

8K core storage minimum.

2.3 Preliminary Programs

Previous run of memory and memory address test.

3. LOADING PROCEDURE

3.1 Method

HRI tape - Starting address 22_8

HS paper tape reader

4. STARTING PROCEDURE

4.1 Control Switch Settings

Data switch settings equal the complement number of complete program passes between bells.

4.2 Starting Address or Addresses

Starting address 13041_g

Restart address 13041_g

4.3 Program and/or Operator Action

(Reference 4.1)

5. OPERATING PROCEDURE

(Reference 4.1)

6. ERRORS

6.1 Error Halts and Description

Reference symbol table for the address of the individual error halt address (EXXXX). The OSR instruction is given a quick check via the program pass complete bell.

OPERATE	E1	E226
LAC	E226A	E316
AND	E316A	E469
XOR	E470	E646
TAD	E647	E879
ADD	E880	E977
SAD	E978	E1105

6.2 Error Recovery

Insert a JMP instruction at the halt address for a test loop.
 Press CONTINUE for additional error halts.

7. RESTRICTIONS

None

8. MISCELLANEOUS

8.1 Execution Time

5 msec/pass

/POP-9 INSTRUCTION TEST
/POP-9 INSTRUCTION TEST TAPE 1A
/INSTRUCTION TEST TAPE 2
/POP-9 INST TEST - PART 2
/INSTRUCTION TEST TAPE 4
/INST TEST TAPE 5
/TAPE 4 PART 2
/INST. TEST TAPE 6
/INSTRUCTION TEST TAPE 7
/INST. TEST TAPE 3
;;;RAA?AA?;;:;;?BLP?AA?AA?;;RXAA?AA?IIIFIII?IIY&AA?AA"? HHHHHAA?AAIII?IIIF?;;F))!
/POP+: INSTRUCTION TEST PART " + TAPE !A
/TAPE " PART
/POP+: INSTRUCTION TEST PART I + END TAPE

COUNT	13231	E1452	12501	E111	1044
E1	23	E1453	12505	E112	1061
E10	61	E1454	12511	E113	1065
E100	713	E1455	12515	E114	1071
E1000	12220	E1456	12521	E115	1075
E1001	12223	E1457	12525	E116	1101
E1002	12226	E1458	12531	E117	1105
E1004	12234	E1459	12535	E118	1107
E1005	12237	E146	743	E119	1113
E1006	12242	E1460	12541	E12	70
E1007	12245	E1461	12545	E120	1115
E1008	12250	E1462	12551	E121	1120
E1009	12253	E1463	12555	E122	1124
E141	715	E1464	12561	E123	1127
E1410	12256	E1465	12565	E124	1134
E1411	12261	E1466	12571	E125	1140
E1412	12264	E1467	12575	E126	1145
E1413	12267	E1468	12600	E127	1152
E1414	12272	E1469	12604	E128	1157
E1415	12275	E147	745	E129	1164
E1416	12300	E1470	12611	E13	74
E1417	12303	E1471	12613	E130	1171
E1418	12306	E1472	12620	E131	1175
E1419	12311	E1473	12622	E132	1201
E142	723	E1474	12627	E133	1205
E1420	12314	E1475	12631	E134	1211
E1421	12317	E1476	12636	E135	1215
E1422	12322	E1477	12640	E136	1221
E1423	12325	E1478	12645	E137	1225
E1424	12330	E1479	12647	E138	1231
E1425	12333	E148	753	E139	1234
E1426	12336	E1480	12654	E14	77
E1427	12341	E1481	12655	E140	1240
E1428	12344	E1482	12663	E141	1244
E1429	12347	E1483	12665	E142	1250
E143	725	E1484	12672	E143	1254
E1430	12352	E1485	12674	E144	1257
E1431	12355	E1486	12701	E145	1262
E1432	12361	E1487	12703	E146	1265
E1433	12365	E1488	12710	E147	1271
E1434	12371	E1489	12712	E148	1276
E1435	12375	E149	1401	E149	1302
E1436	12401	E1490	12717	E15	103
E1437	12405	E1491	12721	E150	1310
E1438	12411	E1492	12726	E151	1315
E1439	12415	E1493	12730	E152	1321
E144	733	E1494	12735	E153	1324
E1440	12421	E1495	12737	E154	1330
E1441	12425	E1496	12744	E155	1334
E1442	12431	E1497	12746	E156	1340
E1443	12435	E1498	12753	E157	1345
E1444	12441	E1499	12755	E158	1352
E1445	12445	E11	65	E159	1357
E1446	12451	E110	1027	E16	107
E1447	12455	E1100	12762	E160	1364
E1448	12461	E1101	12764	E161	1367
E1449	12465	E1102	12771	E162	1372
E145	735	E1103	12773	E163	1375
E1450	12471	E1104	13012	E164	1400
E1451	12475	E1105	13027	E165	1405

E166	1410	E22	136	E27	170
E167	1413	E220	2177	E270	2773
E168	1416	E221	2224	E271	3006
E169	1421	E222	2226	E272	3010
E17	112	E223	2255	E273	3024
E170	1425	E224	2257	E274	3026
E171	1431	E225	2306	E275	3042
E172	1435	E226	2310	E276	3044
E173	1441	E226A	2314	E277	3061
E174	1444	E226R	2316	E278	3063
E175	1451	E226C	2323	E279	3100
E176	1454	E226D	2330	E28	175
E177	1457	E226F	2336	E280	3102
E178	1462	E227	2344	E281	3111
E179	1465	E228	2353	E282	3113
E18	116	E229	2362	E283	3122
E180	1467	E23	143	E284	3124
E181	1473	E230	2372	E285	3135
E182	1476	E231	2402	E286	3137
E183	1501	E232	2413	E287	3150
E184	1504	E233	2424	E288	3152
E185	1507	E234	2436	E289	3165
E186	1512	E235	2450	E29	201
E187	1514	E236	2463	E290	3167
E188	1523	E237	2476	E291	3202
E189	1532	E238	2512	E292	3204
E19	121	E239	2526	E293	3221
E190	1542	E24	151	E294	3223
E191	1552	E240	2543	E295	3240
E192	1563	E241	2560	E296	3242
E193	1574	E242	2564	E297	3261
E194	1606	E243	2570	E298	3263
E195	1620	E244	2574	E299	3302
E196	1633	E245	2601	E3	32
E197	1646	E246	2603	E30	204
E198	1662	E247	2610	E300	3304
E199	1676	E248	2612	E301	3325
E2	26	E249	2620	E302	3327
E20	124	E25	160	E303	3350
E200	1713	E250	2622	E304	3352
E201	1726	E251	2630	E305	3375
E202	1730	E252	2632	E306	3377
E203	1745	E253	2641	E307	3422
E204	1747	E254	2643	E308	3424
E205	1764	E255	2652	E309	3451
E206	1766	E256	2654	E31	207
E207	2005	E257	2664	E310	3453
E208	2007	E258	2666	E311	3500
E209	2026	E259	2676	E312	3502
E21	131	E26	163	E313	3531
E210	2030	E260	2700	E314	3533
E211	2051	E261	2711	E315	3562
E212	2053	E262	2713	E316	3564
E213	2074	E263	2724	E316A	3570
E214	2076	E264	2726	E316R	3574
E215	2121	E265	2740	E316C	3600
E216	2123	E266	2742	E316D	3604
E217	2146	E267	2754	E316F	3610
E218	2150	E268	2756	E316F	3614
E219	2175	E269	2771	E316G	3620

E316H 3624
 E316I 3630
 E316J 3634
 E317 3640
 E318 3644
 E319 3650
 E32 212
 E320 3654
 E321 3660
 E322 3664
 E323 3670
 E324 3674
 E325 3700
 E326 3704
 E327 3710
 E328 3714
 E329 3720
 E33 215
 E330 3724
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 E336 3754
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 E338 3764
 E339 3770
 E34 223
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 E341 4000
 E342 4004
 E343 4010
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 E349 4040
 E35 230
 E350 4044
 E351 4050
 E352 4054
 E353 4060
 E354 4064
 E355 4070
 E356 4074
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 E358 4104
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 E363 4132
 E364 4137
 E365 4144
 E366 4151
 E367 4156
 E368 4163

E369 4170
 E37 242
 E370 4175
 E371 4202
 E372 4207
 E373 4214
 E374 4221
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 E381 4263
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 E384 4304
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 E386 4322
 E387 4332
 E388 4342
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 E394 4417
 E395 4425
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 E397 4437
 E398 4444
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 E401 4455
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 E404 4473
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 E419 4603
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 E421 4615

E422 4624
 E423 4626
 E424 4635
 E425 4637
 E426 4645
 E427 4647
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 E429 4657
 E43 267
 E430 4664
 E431 4666
 E432 4673
 E433 4675
 E434 4703
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 E436 4713
 E437 4715
 E438 4724
 E439 4726
 E44 273
 E440 4735
 E441 4737
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 E443 4751
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 E445 4763
 E446 4774
 E447 4776
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 E449 5011
 E45 276
 E450 5023
 E451 5025
 E452 5037
 E453 5041
 E454 5052
 E455 5054
 E456 5065
 E457 5067
 E458 5077
 E459 5101
 E46 301
 E460 5111
 E461 5113
 E462 5122
 E463 5124
 E464 5133
 E465 5135
 E466 5143
 E467 5145
 E468 5153
 E469 5155
 E47 306
 E470 5161
 E471 5167
 E472 5171
 E473 5177
 E474 5201
 E475 5210
 E476 5212

E477	5221	E530	5617	E585	6175
E478	5223	E531	5626	E586	6177
E479	5233	E532	5630	E587	6206
E48	312	E533	5637	E588	6210
E480	5235	E534	5641	E589	6216
E481	5245	E535	5647	E59	367
E482	5247	E536	5651	E590	6220
E483	5260	E537	5657	E591	6226
E484	5262	E538	5661	E592	6230
E485	5273	E539	5666	E593	6235
E486	5275	E54	340	E594	6237
E487	5307	E540	5670	E595	6244
E488	5311	E541	5675	E596	6246
E489	5323	E542	5677	E597	6253
E49	316	E543	5703	E598	6255
E490	5325	E544	5707	E599	6262
E491	5336	E545	5713	E6	44
E492	5340	E546	5717	E60	377
E493	5351	E547	5723	E600	6264
E494	5353	E548	5727	E601	6272
E495	5363	E549	5733	E602	6274
E496	5365	E55	344	E603	6302
E497	5375	E550	5737	E604	6304
E498	5377	E551	5743	E605	6313
E499	5406	E552	5747	E606	6315
E5	41	E553	5753	E607	6324
E50	322	E554	5757	E608	6326
E500	5410	E555	5763	E609	6336
E501	5417	E556	5767	E61	407
E502	5421	E557	5773	E610	6340
E503	5427	E558	5777	E611	6350
E504	5431	E559	6003	E612	6352
E505	5437	E56	347	E613	6363
E506	5441	E560	6007	E614	6365
E507	5446	E561	6015	E615	6376
E508	5450	E562	6017	E616	6400
E509	5455	E563	6024	E617	6410
E51	325	E564	6026	E618	6412
E510	5457	E565	6034	E619	6422
E511	5465	E566	6036	E62	413
E512	5467	E567	6044	E620	6424
E513	5475	E568	6046	E621	6433
E514	5477	E569	6055	E622	6435
E515	5506	E57	354	E623	6444
E516	5510	E570	6057	E624	6446
E517	5517	E571	6066	E625	6454
E518	5521	E572	6070	E626	6456
E519	5531	E573	6100	E627	6464
E52	331	E574	6102	E628	6466
E520	5533	E575	6112	E629	6473
E521	5543	E576	6114	E63	415
E522	5545	E577	6125	E630	6475
E523	5556	E578	6127	E631	6502
E524	5560	E579	6140	E632	6504
E525	5571	E58	362	E633	6510
E526	5573	E580	6142	E634	6512
E527	5603	E581	6152	E635	6516
E528	5605	E582	6154	E636	6523
E529	5615	E583	6164	E637	6525
E53	334	E584	6166	E638	6532

E639	6534	E693	7166	E747	7530
E64	421	E694	7173	E748	7536
E640	6541	E695	7200	E749	7540
E641	6547	E696	7205	E75	467
E642	6551	E697	7212	E750	7546
E643	6560	E698	7217	E751	7550
E644	6562	E699	7224	E752	7556
E645	6574	E7	50	E753	7560
E646	6576	E70	443	E754	7566
E647	6602	E700	7231	E755	7570
E648	6604	E701	7236	E756	7576
E649	6610	E702	7243	E757	7600
E65	423	E703	7250	E758	7606
E650	6616	E704	7256	E759	7610
E651	6624	E705	7260	E76	473
E652	6632	E706	7266	E760	7616
E653	6640	E707	7270	E761	7620
E654	6646	E708	7276	E762	7626
E655	6654	E709	7300	E763	7630
E656	6662	E71	447	E764	7636
E657	6670	E710	7306	E765	7640
E658	6676	E711	7310	E766	7646
E659	6704	E712	7316	E767	7650
E66	427	E713	7320	E768	7656
E660	6712	E714	7326	E769	7660
E661	6720	E715	7330	E77	477
E662	6726	E716	7336	E770	7666
E663	6734	E717	7340	E771	7670
E664	6742	E718	7346	E772	7676
E665	6750	E719	7350	E773	7700
E666	6756	E72	453	E774	7706
E667	6764	E720	7356	E775	7710
E668	6771	E721	7360	E776	7716
E669	6776	E722	7366	E777	7724
E67	431	E723	7370	E778	7732
E670	7003	E724	7376	E779	7740
E671	7010	E725	7400	E78	504
E672	7015	E726	7406	E780	7746
E673	7022	E727	7410	E781	7754
E674	7027	E728	7416	E782	7762
E675	7034	E729	7420	E783	7770
E676	7041	E73	457	E784	7776
E677	7046	E730	7426	E785	10004
E678	7053	E731	7430	E786	10011
E679	7060	E732	7436	E787	10013
E68	435	E733	7440	E788	10020
E680	7065	E734	7446	E789	10025
E681	7072	E735	7450	E79	511
E682	7077	E736	7456	E790	10032
E683	7104	E737	7460	E791	10037
E684	7111	E738	7466	E792	10044
E685	7116	E739	7470	E793	10051
E686	7123	E74	463	E794	10056
E687	7130	E740	7476	E795	10063
E688	7135	E741	7500	E796	10070
E689	7142	E742	7506	E797	10075
E69	437	E743	7510	E798	10102
E690	7147	E744	7516	E799	10107
E691	7154	E745	7520	E8	53
E692	7161	E746	7526	E80	516

E800	10114	E855	10433	E897GG	11110
E801	10121	E856	10441	E897H	10742
E802	10126	E857	10443	E897HH	11112
E803	10133	E858	10451	E897I	10750
E804	10140	E859	10453	E897II	11120
E805	10145	E86	632	E897J	10752
E806	10152	E860	10461	E897JJ	11122
E807	10154	E861	10463	E897K	10760
E808	10161	E862	10471	E897L	10762
E809	10163	E863	10473	E897M	10770
E81	523	E864	10501	E897N	10772
E810	10170	E865	10503	E897O	11000
E811	10172	E866	10511	E897P	11002
E812	10177	E867	10513	E897Q	11010
E813	10201	E868	10521	E897R	11012
E814	10206	E869	10523	E897S	11020
E815	10210	E87	634	E897T	11022
E816	10215	E870	10531	E897U	11030
E817	10217	E871	10533	E897V	11032
E818	10224	E872	10541	E897W	11040
E819	10226	E873	10543	E897X	11042
E82	550	E874	10551	E897Y	11050
E820	10233	E875	10553	E897Z	11052
E821	10235	E876	10561	E898	11351
E822	10242	E877	10563	E898A	11130
E823	10244	E878	10570	E898AA	11300
E824	10251	E879	10572	E898B	11132
E825	10253	E88	641	E898BB	11302
E826	10260	E880	10600	E898C	11140
E827	10262	E881	10602	E898CC	11310
E828	10267	E882	10610	E898D	11142
E829	10271	E883	10612	E898DD	11312
E83	575	E884	10620	E898E	11150
E830	10276	E885	10622	E898FE	11320
E831	10300	E886	10630	E898F	11152
E832	10305	E887	10632	E898FF	11322
E833	10307	E888	10640	E898G	11160
E834	10314	E889	10642	E898GG	11330
E835	10316	E89	643	E898H	11162
E836	10323	E890	10650	E898HH	11332
E837	10325	E891	10652	E898I	11170
E838	10332	E892	10660	E898II	11340
E839	10334	E893	10662	E898J	11172
E84	611	E894	10670	E898JJ	11342
E840	10341	E895	10672	E898K	11200
E841	10343	E896	10700	E898L	11202
E842	10351	E897	10702	E898M	11210
E843	10353	E897A	10710	E898N	11212
E844	10361	E897AA	11060	E898O	11220
E845	10363	E897R	10712	E898P	11222
E846	10371	E897RH	11062	E898Q	11230
E847	10373	E897C	10720	E898R	11232
E848	10401	E897CC	11070	E898S	11240
E849	10403	E897D	10722	E898T	11242
E85	625	E897DD	11072	E898U	11250
E850	10411	E897F	10730	E898V	11252
E851	10413	E897FE	11100	E898W	11260
E852	10421	E897F	10732	E898X	11262
E853	10423	E897FF	11102	E898Y	11270
E854	10431	E897G	10740	E898Z	11272

E899 11353
 E9 56
 E90 650
 E900 11362
 E901 11364
 E902 11373
 E903 11375
 E904 11404
 E905 11406
 E906 11415
 E907 11417
 E908 11426
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 E91 652
 E910 11437
 E911 11441
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 E913 11452
 E914 11461
 E915 11463
 E916 11472
 E917 11474
 E918 11503
 E919 11505
 E92 657
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 E929 11562
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 E94 666
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 E942 11657
 E943 11661
 E944 11670
 E945 11672
 E946 11701
 E947 11703
 E948 11712
 E949 11714
 E95 670
 E950 11723
 E951 11725

E952 11734
 E953 11736
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 E955 11747
 E956 11756
 E957 11760
 E958 11767
 E959 11771
 E96 675
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 E962 12011
 E963 12013
 E964 12022
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41K	13106	E1	23	E61	407
41KM	13132	E2	26	E62	413
41M	13143	E3	32	E63	415
410	13114	E4	35	E64	421
410K	13103	E5	41	E65	423
410KM	13125	E6	44	E66	427
410M	13144	E7	52	E67	431
4100	13111	E8	53	E68	435
4100K	13100	E9	56	E69	437
4100KM	13122	E10	61	E70	443
4100M	13135	E11	65	E71	447
417	13165	E12	70	E72	453
4177	13170	E13	74	E73	457
41777	13173	E14	77	E74	463
417777	13176	E15	103	E75	467
42	13116	E16	107	E76	473
42K	13105	E17	112	E77	477
42KM	13131	E18	116	E78	504
42M	13142	E19	121	E79	511
420	13113	E20	124	E80	516
420K	13102	E21	131	E81	523
420KM	13124	E22	136	E82	550
420M	13137	E23	143	E83	575
4200	13110	E24	151	E84	611
4200K	13077	E25	162	E85	625
4200KM	13121	E26	163	E86	632
4200M	13134	E27	170	E87	634
43	13163	E28	175	E88	641
437	13166	E29	201	E89	643
4377	13171	E30	204	E90	650
43777	13174	E31	207	E91	652
437777	13177	E32	212	E92	657
44	13115	E33	215	E93	661
44K	13104	E34	223	E94	666
44KM	13126	E35	232	E95	670
44M	13141	E36	234	E96	675
440	13112	E37	242	E97	677
440K	13101	E38	245	E98	704
440KM	13123	E39	251	E99	706
440M	13136	E40	254	E100	713
4400	13107	E41	260	E101	715
4400K	13076	E42	263	E102	723
4400KM	13120	E43	267	E103	725
4400M	13133	E44	273	E104	733
4600K	13162	E45	276	E105	735
47	13164	E46	301	E106	743
477	13167	E47	306	E107	745
4777	13172	E48	312	E108	753
47777	13175	E49	316	E109	1001
477777	13200	E50	322	E110	1027
40P1	740000	E51	325	E111	1044
40P2	740000	E52	331	E112	1061
40P3	740000	E53	334	E113	1065
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		E57	350	E117	1105
		E58	362	E118	1107
		E59	367	E119	1113

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E148	1276	E208	2007	E263	2724
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E167	1413	E226A	2314	E282	3113
E168	1416	E226R	2316	E283	3122
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E314	3533	E364	4137	E424	4635
E315	3562	E365	4144	E425	4637
E316	3564	E366	4151	E426	4645
E316A	3570	E367	4156	E427	4647
E316B	3574	E368	4163	E428	4655
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E316D	3604	E370	4175	E430	4664
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E316J	3634	E376	4233	E436	4713
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937	11626	997	12207	E1457	12525
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963	12013	1423	12325	E1483	12665
964	12022	1424	12330	E1484	12672
965	12024	1425	12333	E1485	12674
966	12033	1426	12336	E1486	12701
967	12035	1427	12341	E1487	12703
968	12044	1428	12344	E1488	12710
969	12046	1429	12347	E1489	12712
970	12054	1430	12352	E1490	12717
971	12056	1431	12355	E1491	12721
972	12064	1432	12361	E1492	12726
973	12066	1433	12365	E1493	12730
974	12074	1434	12371	E1494	12735
975	12076	1435	12375	E1495	12737
976	12111	1436	12401	E1496	12744
977	12113	1437	12405	E1497	12746
978	12116	1438	12411	E1498	12753
979	12121	1439	12415	E1499	12755
980	12124	1440	12421	E1100	12762
981	12127	1441	12425	E1101	12764
982	12132	1442	12431	E1102	12771
983	12135	1443	12435	E1103	12773
984	12140	1444	12441	E1104	13012
985	12143	1445	12445	E1105	13027
986	12146	1446	12451	00	13044
987	12151	1447	12455	E400K	13045
988	12154	1448	12461	E200K	13046
989	12157	1449	12465	E100K	13047
990	12162	E1450	12471	E40K	13050
991	12165	E1451	12475	E20K	13051
992	12170	E1452	12501	E10K	13052

K4K	13053	K37	13147
K2K	13054	K77	13150
K1K	13055	K177	13151
K400	13056	K377	13152
K200	13057	K777	13153
K100	13060	K1777	13154
K40	13061	K3777	13155
K20	13062	K7777	13156
K10	13063	K17777	13157
K4	13064	K37777	13160
K2	13065	K77777	13161
K1	13066	K600K	13162
K1S	13067	K3	13163
K2S	13070	K7	13164
K3S	13071	K17	13165
K4S	13072	K37	13166
K5S	13073	K77	13167
K6S	13074	K177	13170
K7S	13075	K377	13171
K400K	13076	K777	13172
K200K	13077	K1777	13173
K100K	13100	K3777	13174
K40K	13101	K7777	13175
K20K	13102	K17777	13176
K10K	13103	K37777	13177
K4K	13104	K77777	13200
K2K	13105	K600K	13201
K1K	13106	K777K	13202
K400	13107	K5	13203
K200	13110	K11	13204
K100	13111	K21	13205
K40	13112	K41	13206
K20	13113	K101	13207
K10	13114	K201	13210
K4	13115	K401	13211
K2	13116	K1001	13212
K1	13117	K2001	13213
K400KM	13120	K4001	13214
K200KM	13121	K10001	13215
K100KM	13122	KHALT	13216
K40KM	13123	KCAL0	13217
K20KM	13124	K2021	13220
K10KM	13125	K2120	13221
K4KM	13126	KCALF	13222
K525	13127	KSKP	13223
K2525	13130	KCLA	13224
K2KM	13131	K5253	13225
K1KM	13132	K60K	13226
K400M	13133	K6625	13227
K200M	13134	K615	13230
K100M	13135	KCOUNT	13231
K40M	13136	KOP3	740000
K20M	13137	KOP2	740000
K10M	13140	KOP1	740000
K4M	13141	KALT	740000
K2M	13142		
K1M	13143		
K3	13144		
K7	13145		
K17	13146		

/PDP-9 INSTRUCTION TEST
 /OPERATE GROUP, LAC, AND
 NOP1=NOP
 NOP2=NOP
 NOP3=NOP
 HALT=HLT

```

                                /PRESS IO RESTART TO CLEAR AC LINK
                                /TEST SKP
PART1,  SKP
E1,     HALT                    /ERROR; SKP FAILED TO SKIP

                                /TEST CLA - SZA
                                /AC=0
                                /ERROR; CLA OR SZA FAILED TO SKIP
E2,     CLA
        SZA
        HALT

                                /TEST SMA
                                /AC=0
                                /ERROR; SMA SKIPPED OR SKP FAILED
E3,     CLA
        SMA
        SKP
        HALT

                                /TEST SPA
                                /AC=0
                                /ERROR; SPA FAILED TO SKIP
E4,     CLA
        SPA
        HALT

                                /TEST SNA
                                /AC=0
                                /ERROR; SNA SKIPPED OR SKP FAILED
E5,     CLA
        SNA
        SKP
        HALT

                                /TEST SZL - CLL
                                /LINK =0
                                /ERROR; SZL FAILED TO SKIP OR
                                /CLL FAILED TO CLEAR LINK
E6,     CLL
        SZL
        HALT

                                /TEST SNL
                                /LINK=0
                                /ERROR; SNL SKIPPED
E7,     CLL
        SNL
        SKP
        HALT

```

```

      CLA:CLL      /TEST CLA:CLL
      SZA         /AC=0, L=0
E8,   HALT       /ERROR; AC NOT 0

      CLA:CLL      /TEST CLA:CLL
      SZL        /AC=0, L=0
E9,   HALT       /ERROR; L NOT 0

      CLA         /TEST SKP:SPA
      SKP:SPA    /AC=0
E10,  HALT       /ERROR; SKP:SPA FAILED TO SKIP

      CLA         /TEST SKP:SNA
      SKP:SNA   /AC=0
E11,  HALT       /ERROR; SKP:SNA SKIPPED

      CLL        /TEST SKP:SZL
      SKP:SZL   /L=1
E12,  HALT       /ERROR; SKP:SZL FAILED TO SKIP

      CLA         /TEST SPA:SNA
      SPA:SNA   /AC=0
E13,  HALT       /ERROR; SPA:SNA SKIPPED

      CLA:CLL    /TEST SPA:SZL
      SPA:SZL   /L=0, AC=0
E14,  HALT       /ERROR; SPA:SZL FAILED TO SKIP
```

```

          CLA:CLL          /TEST SNA:SZL
          SNA:SZL          /L=0, AC=0
          SKP
E15,    HALT              /ERROR; SNA:SZL SKIPPED

          CLA:CLL          /TEST SNA:SPA:SKP:SZL
          SKP:SPA:SZL:SNA /AC=0, L=0
          SKP              /ERROR; SNA:SPA:SKP:SZL SKIPPED
E16,    HALT

          CLA              /TEST SMA:SZA
          SMA:SZA          /AC=0
E17,    HALT              /ERROR; SMA SZA FAILED TO SKIP

          CLA:CLL          /TEST SMA:SNL
          SMA:SNL          /L=0, AC=0
          SKP
E18,    HALT              /ERROR; SMA:SNL SKIPPED

          CLA:CLL          /TEST SZA:SNL
          SZA:SNL          /L=0, AC=0
E19,    HALT              /ERROR; SZA:SNL SKIPPED

          CLA:CLL          /TEST SMA:SZA:SNL
          SMA:SZA:SNL     /AC=0, L=0
E20,    HALT              /ERROR; SMA:SZA:SNL FAILED TO SKIP

          125 CLA           /TEST CML - SZL
          CML             /L=0
          SZL             /L=1
          SKP
E21, 130/131 HALT        /ERROR; SZL SKIPPED OR
                          /CML FAILED TO SET LINK

```

```

          CLL          /TEST CLL
          CML          /L=0
          CLL          /L=1
          SZL          /L=0
E22,    HALT          /ERROR; CLL FAILED TO CLEAR LINK

          CLL          /TEST CML
          CML          /L=0
          CML          /L=1
          SZL          /L=0
E23,    HALT          /ERROR; CML FAILED TO SET LINK

          CLL          /TEST CLL:CML
          CML          /L=0
          CLL:CML     /L=1
          SZL
          SKP
E24,    HALT          /ERROR; CLL:CML FAILED TO SET LINK

          CLL          /TEST CLL:CML
          CML          /L=0
          CLL          /L=1
          CLL:CML     /L=0
          SZL          /L=1
          SKP
E25,60  HALT          /ERROR; CLL:CML FAILED TO SET LINK

          CLL          /TEST SKP:SZL
          SKP:SZL     /L=0
E26,    HALT          /ERROR; SKP:SZL FAILED TO SKIP

          CLA          /TEST SZL:SNA
          CLL:CML     /AC=0
          SZL:SNA    /L=1
          SKP
E27,    HALT          /ERROR; SZL:SNA SKIPPED

```


	CLA	/TEST SZL:SPA
	CLL:CML	/AC=0
	SZL:SPA	/L=1
	SKP	
E28,	HALT	/ERROR; SZL:SPA SKIPPED
	CLA:CLL:CML	/TEST CLA:CLL:CML
	SZL	/AC=0, L=1
	SKP	
E29,	HALT	/ERROR; LINK NOT 1
	CLA:CLL:CML	/TEST CLA:CLL:CML
	SZA	/AC=0, L=1
E30,	HALT	/ERROR AC NOT 0
	CLA:CLL:CML	/TEST SNL:SZA
	SNL:SZA	/AC=0, L=1
E31,	HALT	/ERROR; SNL:SZA FAILED TO SKIP
	CLA:CLL:CML	/TEST SNL:SMA
	SNL:SMA	/AC=0, L=1
E32,	HALT	/ERROR; SNL:SMA FAILED TO SKIP

E33,	CLA:CLL:CML SNL:SZL:SMA HALT	/TEST SNL:SZL:SMA /AC=0, L=1 /ERROR; SNL:SZL:SMA FAILED /TO SKIP
E34,	CLA CMA CLA SNA SKP HALT	/TEST CMA-CLA /AC=0 /AC=ONES /ERROR; CLA FAILED TO CLEAR AC
230 E35,	CLA CMA SPA SKP HALT	/TEST CMA-SPA /AC=0 /AC=ONES /ERROR; SPA SKIPPED OR /CMA FAILED TO SET AC BIT 0
E36,	CLA CMA SNA HALT	/TEST CMA-SNA /AC=0 /AC=ONES /ERROR; SNA FAILED TO SKIP /OR CMA FAILED TO SET ANY AC BIT
E37,	CLA CMA CMA SNA SKP HALT	/TEST CMA /AC=0 /AC=ONES /AC=0 /ERROR; CMA FAILED TO /COMPLIMENT AC TO 0
E38,	CLA:CMA SNA HALT	/TEST CLA:CMA /AC=ONES /ERROR; CLA:CMA FAILED TO /SET ANY AC BIT

	CLA:OMA SZA SKP	/TEST SZA /AC=ONES
E39,	HALT	/ERROR; SZA SKIPPED
	CLA:OMA SMA	/TEST SMA /AC=ONES
E40,	HALT	/ERROR; SMA FAILED TO SKIP
	CLA:OMA SKP:SPA SKP	/TEST SKP:SPA /AC=ONES
E41,	HALT	/ERROR; SKP:SPA SKIPPED
	CLA:OMA SKP:SNA	/TEST SKP:SNA /AC=ONES
E42,	HALT	/ERROR; SKP:SNA FAILED TO SKIP
	CLA:OMA SPA:SNA SKP	/TEST SPA:SNA /AC=ONES
E43,	HALT	/ERROR; SPA:SNA SKIPPED
	CLA:OMA:CLL:CML SNA:SPA:SKP:SZL SKP	/TEST SKP:SNA:SPA /AC=ONES, L=1
E44,	HALT	/ERROR; SKP:SNA:SPA:SZL SKIPPED

E45,	CLA:CMA SMA:SZA HALT	/TEST SMA:SZA /AC=ONES /ERROR: SMA:SZA FAILED TO SKIP
E46,	CLA:CMA:CLL:CML SMA:SZA:SNL HALT	/TEST SMA:SZA:SNL /AC=ONES, L=1 /ERROR: SMA:SZA:SNL
E47,	CLA:CMA NOP CMA SZA HALT	/TEST NOP /AC=ONES /AC=0 /ERROR: NOP ALTERED THE AC
E48,	CLA NOP SZA HALT	/TEST NOP /AC=0 /ERROR: NOP SET AN AC BIT
E49,	CLL:CML NOP SNL HALT	/TEST NOP /L=1 /ERROR: NOP CLEARED THE LINK
E50,	CLL NOP SZL HALT	/TEST NOP /L=0 /ERROR: NOP SET THE LINK

```

          CLA          /TEST SZA:CMA
          SZA:CMA     /AC=0
E51,      HALT        /AC=ONES
          /ERROR; SZA FAILED TO SKIP

          CLA:CMA     /TEST SZA:CLA
          SZA:CLA     /AC=ONES
E52,      SKP        /AC=0
          HALT        /ERROR; SZA SKIPPED

          CLL         /TEST SZL:CML
          SZL:CML     /L=0
E53,      HALT        /ERROR; SZL FAILED TO SKIP

          CLL:CML     /TEST SZL:CLL
          SZL:CLL     /L=1
E54,      SKP
          HALT        /ERROR; SZL SKIPPED

          CLA:CMA:CLL:CML /TEST SKP:SZL:SPA:CLA:CLL
          SKP:SZL:SPA:CLA:CLL /AC=ONES, L=1
          SKP          /AC=0, L=0
E55,      HALT        /ERROR; SKP:SZL:SPA SKIPPED

          CLA:CLL:CML /TEST SZA:SNL:CMA:CLL
          SZA:SNL:CMA:CLL /AC=0, L=1
E56,      HALT        /AC=ONES, L=0
          /ERROR; SZA:SNL FAILED TO SKIP

          CLA:CMA     /TEST CLA:SKP
          SKP:CLA     /AC=ONES
          NOP         /AC=0
          SZA
E57,      HALT        /ERROR; CLA FAILED TO CLEAR AC

```

	CLA	/TEST SKP:CLA:CMA
	SKP:CLA:CMA	/AC=0
	NOP	/AC=ONES
	CMA	/AC=0
E58,	SZA	
	HALT	/ERROR; CLA:CMA FAILED TO /COMPLEMENT THE AC
		/TEST SKP:CLL:CML
	CLL	/L=0
	SKP:CLL:CML	/L=1
	NOP	
	SNL	
E59,	HALT	/ERROR; CLL:CML FAILED TO SET /THE LINK
		/TEST CMA SERIES
	CLA:CMA	/AC=ONES
	CMA	/AC=0
	CMA	/AC=ONES
	CMA	/AC=0
	CMA	/AC=ONES
	CMA	/AC=0
E60,	SZA	
	HALT	/ERROR; AC NOT 0 CMA FAILED
		/TEST CML SERIES
	CLL:CML	/L=1
	CML	/L=0
	CML	/L=1
	CML	/L=0
	CML	/L=1
	CML	/L=0
E61,	SZL	
	HALT	/ERROR; L NOT 0 CML FAILED
		/TEST RAL - AC
	CLA:CLL	/AC=0, L=0
	RAL	
	SZA	
E62,	HALT	/ERROR; AC NOT 0 RAL FAILED
	SZL	
E63,	HALT	/ERROR; LINK NOT 0

```

          CLA:CLL      /TEST RAR -AC
          RAR          /AC=0, L=0
          SZA
E64,     HALT          /ERROR; AC NOT 0 RAR FAILED
          SZL
E65,     HALT          /ERROR; LINK NOT 0 RAR FAILED
          SZA
          CLA:CLL      /TEST RTL-AC
          RTL          /AC=0, L=0
          SZA
E66,     HALT          /ERROR; AC NOT 0 RTL FAILED
          SZL
E67,     HALT          /ERROR; LINK NOT 0 RTL FAILED
          SZA
          CLA:CLL      /TEST RTR - AC
          RTR          /AC=0, L=0
          SZA
E68,     HALT          /ERROR; AC NOT 0 RTR FAILED
          SZL
E69,     HALT          /ERROR; LINK NOT 0 RTR FAILED
```

```
          /TEST RAR-SMA
          /AC=0, L=1
CLA:CLL:CML
RAR
SMA
E70,  HALT      /ERROR; AC BIT 0 NOT 1 RAR OR SMA
          /FAILED

          /TEST RAR-SZL
          /AC=0, L=1
CLA:CLL:CML
RAR
SZL
E71,  HALT      /ERROR; LINK NOT 0 RAR FAILED

          /TEST RAL - SNA
          /AC=0, L=1
CLA:CLL:CML
RAL
SNA
E72,  HALT      /ERROR; AC BIT17 NOT 1 RAL OR SNA FAILED

          /TEST RAL-SZL
          /AC=0, L=1
CLA:CLL:CML
RAL
SZL
E73,  HALT      /ERROR; LINK NOT 0 RAL FAILED

          /TEST RTR-SNA
          /AC=0, L=1
CLA:CLL:CML
RTR
SNA
E74,  HALT      /ERROR; AC BIT 1 NOT 1 RTR OR SNA FAILED

          /TEST RTR-SZL
          /AC=0, L=1
CLA:CLL:CML
RTR
SZL
E75,  HALT      /ERROR; LINK NOT 0 RTR FAILED

          /TEST RTL-SNA
          /AC=0, L=1
CLA:CLL:CML
RTL
SNA
E76,  HALT      /ERROR; AC BIT 16 NOT 1 RTL OR SNA
          /FAILED
```



```

          CLA:CLL:CML      /TEST RTL-SZL
          RTL              /AC=0, L=1
          SZL
E77,      HALT            /ERROR; LINK NOT 0 RTL FAILED

          CLA:CLL:CML      /TEST RAR - RAL
          RAR              /AC=0, L=1
          RAL
E78,      SNL
          HALT            /ERROR; LINK BIT NOT 1 AFTER ROTATES

          CLA:CLL:CML      /TEST RTR-RTL
          RTR              /AC=0, L=1
          RTL
E79,      SNL
          HALT            /ERROR; LINK BIT NOT 1 AFTER ROTATES

          CLA:CLL:CML      /TEST RAL-RAR
          RAL              /AC=0, L=1
          RAR
E80,      SNL
          HALT            /ERROR; LINK BIT NOT 1 AFTER ROTATES

          CLA:CLL:CML      /TEST RTL-RTR
          RTL              /AC=0,L=1
          RTR
E81,      SNL
          HALT            /ERROR; LINK BIT NOT 1 AFTER ROTATES
```

```

/TEST RAR SERIES AND -LNK
/AC=0, L=1
CLA:CLL:CML
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
RAR
SNA:SZL
HALT

```

```

E82, /ERROR; AC BIT 17 NOT 1, OR L=1 AFTER
/ROTATE SERIES

```

```

/TEST RAL SERIES AND -LNK
/AC=0, L=1
CLA:CLL:CML
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
RAL
SNA:SZL
HALT

```

```

E83, /ERROR; AC BIT 0 NOT 1, OR L=1 AFTER
/ROTATE SERIES

```

```

                                /TEST RTL SERIES AND LINK
                                /AC=0, L=1
CLA:CLL:CML
RTL
RTL
RTL
RTL
RTL
RTL
RTL
RTL
SNA:SZL
E84, HALT                                /ERROR: AC BIT 0 NOT 1, OR L=1 AFTER
                                        /ROTATE SERIES

                                /TEST RTR SERIES AND LINK
                                /AC=0, LINK=1
CLA:CLL:CML
RTR
RTR
RTR
RTR
RTR
RTR
RTR
RTR
SNA:SZL
E85, HALT                                /ERROR: AC BIT 17 NOT 1, OR L=1 AFTER
                                        /ROTATE SERIES
```

```
          /TEST RAR
CLA:OMA:CLL:CML /AC=ONES, L=1
RAR
OMA
SZA
E86,  HALT          /ERROR; AC NOT ONES RAR FAILED

          SNL
E87,  HALT          /ERROR; LINK NOT 1 RAR FAILED

          /TEST RAL
CLA:OMA:CLL:CML /AC=ONES, L=1
RAL
OMA
SZA
E88,  HALT          /ERROR; AC NOT ONES RAL FAILED

          SNL
E89,  HALT          /ERROR; LINK NOT 1 RAL FAILED

          /TEST RTR
CLA:OMA:CLL:CML /AC=ONES, L=1
RTR
OMA
SZA
E90,  HALT          /ERROR; AC NOT ONES RTR FAILED

          SNL
E91,  HALT          /ERROR; LINK NOT 1 RTR FAILED
```

```
          /TEST RTL
CLA:CMA:CLL:CML /AC=ONES, L=1
RTL
CMA
SZA
E92, HALT /ERROR; AC NOT ONES RIL FAILED

SNL
E93, HALT /ERROR; LINK NOT 1 RTL FAILED

          /TEST RAR
CLA:CMA:CLL /AC=ONES, L=0
RAR
CMA
SNA
E94, HALT /ERROR; AC BIT 0 NOT 0 RAR FAILED

SNL
E95, HALT /ERROR; LINK NOT 1 RAR FAILED

          /TEST RAL
CLA:CMA:CLL /AC=ONES, L=0
RAL
CMA
SNA
E96, HALT /ERROR; AC BIT 17 NOT 0, RAL FAILED

SNL
E97, HALT /ERROR; LINK NOT RAL FAILED
```

```
          /TEST RTL
CLA:CMA:CLL /AC=ONES, L=0
RTL
CMA
SNA
E98, HALT /ERROR; AC BIT 16 NOT 0 RTL FAILED

SNL
E99, HALT /ERROR; LINK NOT 1 RTL FAILED

          /TEST RTR
CLA:CMA:CLL /AC=ONES, L=0
RTR
CMA
SNA
E100, HALT /ERROR; AC BIT 1 NOT 0 RTR FAILED

SNL
E101, HALT /ERROR; LINK NOO 1 RTR FAILED

          /TEST RAR-RAL
CLA:CMA:CLL /AC=ONES, L=0
RAR
RAL
CMA
SZA
E102, HALT /ERROR; AC NOT ONES AFTER ROTATES

SZL
E103, HALT /ERROR; LINK NOT 0 AFTER ROTATES
```

```
          CLA:CMA:CLL      /TEST RTR-RTL
          RTR              /AC=ONES, L=0
          RTL
          CMA              /AC=0
          SZA
E104,    HALT              /ERROR; AC NOT ONES AFTER ROTATES
          SZL
E105,    HALT              /ERROR; LINK NOT 0 AFTER ROTATES
          CLA:CMA:CLL      /TEST RAL-RAR
          RAL              /AC=ONES, L=0
          RAR
          CMA              /AC=0
          SZA
E106,    HALT              /ERROR; AC NOT ONES AFTER ROTATES
          SZL
E107,    HALT              /ERROR; LINK NOT 0 AFTER ROTATES
          CLA:CMA:CLL      /TEST RTL-RTR
          RTL              /AC=ONES, L=0
          RTR
          CMA              /AC=0
          SZA
E108,    HALT              /ERROR; AC NOT ONES AFTER ROTATES
START
```



```

          /TEST RTL SERIES
          /AC=ONES, L=0
CLA:CMA:CLL
RTL
RTL
RTL
RTL
RTL
RTL
RTL
RTL
CML
SPA:SZL
E111, HALT
          /L=0
          /ERROR; AC BIT 0 NOT 0, OR L=0 AFTER
          /ROTATE SERIES

          /TEST RTR SERIES
          /AC=ONES, L=0
CLA:CMA:CLL
RTR
RTR
RTR
RTR
RTR
RTR
RTR
RTR
RTR
CMA:CML
SNA:SZL
E112, HALT
          /AC=000001, L=0
          /ERROR; AC BIT 17 NOT 1, OR L=0
          /AFTER ROTATE SERIES

          /TEST CLA:RAL
          /AC=ONES, L=0
          /AC=0
CLA:CMA:CLL
CLA:RAL
SZA
E113, HALT
          /ERROR; AC NOT 0, CLA:RAL
          /FAILED

          /TEST CLA:RAR
          /AC=ONES, L=0
          /AC=0
CLA:CMA:CLL
CLA:RAR
SZA
E114, HALT
          /ERROR; AC NOT 0, C_A:RAR FAILED

```

```

          CLA:CLL:CML      /TEST CLL:RAL
          CLL:RAL          /AC=0, L=1
          SZA              /AC=0, L=0
E115,    HALT              /ERROR; AC NOT 0, CLL:RAL FAILED

          CLA:CLL:CML      /TEST CLL:RAR
          CLL:RAR          /AC=0, L=1
          SZA              /AC=0, L=0
E116,    HALT              /ERROR; AC NOT 0, CLL:RAR FAILED

          CLA:CMA:CLL:CML  /TEST CLL:CLA:RAL
          CLL:CLA:RAL      /AC=ONES, L=1
          SZA              /AC=0, L=0
E117,    HALT              /ERROR; AC NOT 0, L NOT 0
          SZA              /CLL:CLA:RAL FAILED

          SZA
E118,    HALT              /ERROR; LINK NOT 0
          SZA              /CLL:CLA:RAL FAILED

          CLA:CMA:CLL:CML  /TEST CLL:CLA:RAR
          CLL:CLA:RAR      /AC=ONES, L=1
          SZA              /AC=0, L=0
E119,    HALT              /ERROR; AC NOT 0
          SZA              /CLL:CLA:RAR FAILED

          SZA
E120,    HALT              /ERROR; L NOT 0
          SZA              /CLL:CLA:RAR FAILED

```

E121,	CLA:CLL RAL:SKP HALT	/TEST RAL:SKP /AC=0, L=0 /ERROR; SKP FAILED TO SKIP
E122,	CLL:CML:CLA RTR SPA:RAL HALT	/TEST RAL:SPA /AC=0, L=1 /AC=200000, L=0 /ERROR; SPA FAILED TO SKIP
E123,	CLL:CML:CLA SPA:RAR HALT	/TEST RAR:SPA /AC=0, L=1 /ERROR; SPA FAILED TO SKIP
E124,	CLL:CML:CLA RTR RAR SPA:RTL HALT	/TESS RTL:SPA /AC=0, L=1 /AC=200000 /AC=400000 /ERROR; SPA FAILED TO SKIP
E125,	CLL:CML:CLA RAL SPA:RTR HALT	/TEST RTR:SPA /AC=0, L=1 /AC=000001, L=0 /ERROR; SPA FAILED TO SKIP
E126,	CLA:CLL:CML RAR RAL:SPA SKP HALT	/TEST SPA:RAL /AC=0, L=1 /AC=400000 /ERROR; SPA SKIPPED

```
          CLA:CLL:CML      /TEST SPA:RAR
          RAR              /AC=0, L=1
          RAR:SPA         /AC=400000
          SKP
E127,    HALT             /ERROR; SPA SKIPPED

          CLA:CLL:CML      /TEST SPA:RTL
          RAR              /AC=0, L=1
          RTL:SPA         /AC=400000
          SKP
E128,    HALT             /ERROR; SPA SKIPPED

          CLA:CLL:CML      /TEST SPA:RTR
          RAR              /AC=0, L=1
          RTR:SPA         /AC=400000
          SKP
E129,    HALT             /ERROR; SPA SKIPPED

          CLA:CLL:CML      /TEST CLA:SPAIRAR
          RAR              /AC=0, L=1
          CLA:SPAIRAR     /AC=400000
          SKP
E130,    HALT             /ERROR; SPA SKIPPED

          CLA:CLL:CML      /TEST RAL:SNA
          RAL:SNA         /AC=0, L=1
          SKP
E131,    HALT             /ERROR; SNA SKIPPED

          CLA:CLL:CML      /TEST RAR:SNA
          RAR:SNA         /AC=0, L=1
          SKP
E132,    HALT             /ERROR; SNA SKIPPED
```

	CLA:CLL:CML	/TEST RTL:SNA
	RTL:SNA	/AC=0, L=1
	SKP	
E133,	HALT	/ERROR; SNA SKIPPED
	CLA:CLL:CML	/TEST RTR:SNA
	RTR:SNA	/AC=0, L=1
	SKP	
E134,	HALT	/ERROR; SNA SKIPPED
	CLA:CLL:CML	/TEST RAL:SNA
	RAR	/AC=0, L=1
	SNA:RAL	/AC=400000
E135,	HALT	/ERROR; SNA FAILED TO SKIP
	CLA:CLL:CML	/TEST RAR:SNA
	RAL	/AC=0, L=1
	SNA:RAR	/AC=000001
E136,	HALT	/ERROR; SNA FAILED TO SKIP
	CLA:CLL:CML	/TEST RTL:SNA
	RTR	/AC=0, L=1
	SNA:RTL	/AC=200000
E137,	HALT	/ERROR; SNA FAILED TO SKIP
	CLA:CLL:CML	/TEST RTR:SNA
	RTL	/AC=0, L=1
	SNA:RTR	
E138,	HALT	/ERROR SNA FAILED TO SKIP

```
          CLA:CMA:CLL      /TEST CLLISNA:RAR
          CLA:SNA:RAR      /AC=ONES, L=0
E139,    HALT             /ERROR; SNA FAILED TO SKIP

          CLA:CLL:CML      /TEST RAL:SZL
          RAL:SZL         /AC=0, L=1
          SKP
E140,    HALT             /ERROR; SZL SKIPPED

          CLA:CLL:CML      /TEST RAR:SZL
          RAR:SZL         /AC=0, L=1
          SKP
E141,    HALT             /ERROR; SZL SKIPPED

          CLA:CLL:CML      /TEST RTL:SZL
          RTL:SZL         /AC=0, L=1
          SKP
E142,    HALT             /ERROR; SZL SKIPPED

          CLA:CLL:CML      /TEST RTR:SZL
          RTR:SZL         /AC=0, L=1
          SKP
E143,    HALT             /ERROR; SZL SKIPPED

          CLA:CMA:CLL      /TEST RAL:SZL
          RAL:SZL         /AC=ONES, L=0
E144,    HALT             /ERROR; SZL FAILED TO SKIP

          CLA:CMA:CLL      /TEST RAR:SZL
          RAR:SZL         /AC=ONES, L=0
E145,    HALT             /ERROR; SZL FAILED TO SKIP
```

```
E146,  CLA:SMA:CLL      /TEST RTR:SZL
        RTR:SZL      /AC=ONES, L=0
        HALT         /ERROR; SZL FAILED TO SKIP

        CLA:CLL:CML  /TEST CLL:SZL:RAL
        CLL:SZL:RAL  /AC=0, L=1
        SKP
E147,  HALT         /ERROR; SZL SKIPPED

        CLA:CLL:CML  /TEST SMA:RAL
        RTR          /AC=0, L=1
        RAL:SMA      /AC=200000
        SKP
E148,  HALT         /ERROR; SMA SKIPPED

        CLA:CLL:CML  /TEST SMA:RAR
        RAR:SMA      /AC=0, L=1
        SKP
E149,  HALT         /ERROR; SMA SKIPPED

        CLA:CLL:CML  /TEST SMA:RTL
        RTR          /AC=0, L=1
        RAR          /AC=200000
        RTL:SMA      /AC=100000
        SKP
E150,  HALT

        CLA:CLL:CML  /TEST SMA:RTR
        RAL          /AC=0, L=1
        RTR:SMA      /AC=000001
        SKP
E151,  HALT         /ERROR; SMA SKIPPED
```

E152,	CLA:CLL:CML RAR RAL:SMA HALT	/TEST SMA:RAL /AC=0, L=1 /AC=400000, L=0 /ERROR: SMA FAILED TO SKIP
E153,	CLA:OMA:CLL RAR:SMA HALT	/TEST SMA:RAR /AC=ONES, L=0 /ERROR: SMA FAILED TO SKIP
E154,	CLA:CLL:CML RAR RTL:SMA HALT	/TEST SMA:RTL /AC=0, L=1 /AC=400000, L=0 /ERROR: SMA FAILED TO SKIP
E155,	CLA:CLL:CML RAR RTR:SMA HALT	/TEST SMA:RTR /AC=0, L=1 /AC=400000, L=0 /ERROR: SMA FAILED TO SKIP
E156,	CLA:CLL:CML RAR CLA:CLL:RAR:SMA HALT	/TEST SMA:RAR:CLA:CLL /AC=0, L=1 /AC=400000, L=0 /ERROR: SMA FAILED TO SKIP
E157,	CLA:CLL:CML RAL RAL:SZA SKP HALT	/TEST SZA:RAL /AC=0, L=1 /AC=000001, L=0 /ERROR: SZA SKIPPED


```
          /TEST SZA:RAR
          /AC=0, L=1
CLA:CLL:CML RAL
          /AC=000001, L=0
RAR:SZA
SKP
E158, HALT          /ERROR: SZA SKIPPED

          /TEST SZA:RTL
          /AC=0, L=1
CLA:CLL:CML RTR
          /AC=200000, L=0
RTL:SZA
SKP
E159, HALT          /ERROR: SZA SKIPPED

          /TEST SZA:RTR
          /AC=0, L=1
CLA:CLL:CML RTL
          /AC=000002
RTR:SZA
SKP
E160, HALT          /ERROR: SZA SKIPPED

          /TEST SZA:RAL
          /AC=0, L=1
CLA:CLL:CML RAL
          /AC=0, L=1
RAR:SZA
E161, HALT          /ERROR: SZA FAILED TO SKIP

          /TEST SZA:RAR
          /AC=0, L=1
CLA:CLL:CML RAR
          /AC=0, L=1
RAR:SZA
E162, HALT          /ERROR: SZA FAILED TO SKIP

          /TEST SZA:RTL
          /AC=0, L=1
CLA:CLL:CML RTL
          /AC=0, L=1
RTL:SZA
E163, HALT          /ERROR: SZA FAILED TO SKIP
```

E164,	CLA:CLL:CML RTR:SZA HALT	/TEST SZA:RTR /AC=0, L=1 /ERROR, SZA FAILED TO SKIP
E165,	CLA:CLL:CML RAR CLL:RAR:CLA:SZA SKP HALT	/TEST CLL:RAR:CLA:SZA /AC=0, L=1 /AC=400000 /ERROR; SZA SKIPPED
E166,	CLA:CLL:CML RAL:SNL HALT	/TEST SNL:RAL /AC=0, L=1 /ERROR; SNL FAILED TO SKIP
E167,	CLA:CLL:CML RAR:SNL HALT	/TEST SNL:RAR /AC=0, L=1 /ERROR; SNL FAILED TO SKIP
E168,	CLA:CLL:CML RTL:SNL HALT	/TEST SNL:RTL /ERROR; SNL FAILED TO
E169,	CLA:CLL:CML RTR:SNL HALT	/TEST SNL:RTR /AC=0, L=1 /ERROR; SNL FAILED TO SKIP
E170,	CLA:CMA:CLL RAL:SNL SKP HALT	/TEST SNL:RAL /AC=ONES, L=0 /ERROR; SNL SKIPPED

```
CLA:OMA:CLL      /TEST SNL:RAR
RAR:SNL          /AC=ONES, L=0
SKP
E171, HALT       /ERROR; SNL SKIPPED

CLA:OMA:CLL      /TEST SNL:RTL
RTL:SNL          /AC=ONES, L=0
SKP
E172, HALT       /ERROR; SNL SKIPPED

CLA:OMA:CLL      /TEST SNL:RTR
RTR:SNL          /AC=ONES, L=0
SKP
E173, HALT       /ERROR; SNL SKIPPED

CLA:OMA:CLL:CML  /TEST CLA:CLL:RAL:SNL
CLA:CLL:RAL:SNL /AC=ONES, L=1
E174, HALT       /ERROR; SNL FAILED TO SKIP
START
```

/INSTRUCTION TEST TAPE 2

```

          /TEST LAW 760000, AC=0
          CLA:CLL
          LAW 00000 /AC=0
          RAL
          SNL:CLL /AC=760000
          /L=1
E175, HALT /ERROR; AC BIT 0 NOT A 1, LAW 760000
          /FAILED
          RAL
          SNL:CLL /AC=700000
          /L=1
E176, HALT /ERROR; AC BIT 1 NOT A 1, LAW 760000
          /FAILED
          RAL
          SNL:CLL /AC=600000
          /L=1
E177, HALT /ERROR; AC BIT 2 NOT A 1, LAW 760000
          /FAILED
          RAL
          SNL:CLL /AC=400000
          /L=1
E178, HALT /ERROR; AC BIT 3 NOT A 1, LAW 760000
          /FAILED
          RAL
          SNL:CLL /AC=000000
          /L=1
E179, HALT /ERROR; AC BIT 4 NOT A 1, LAW 760000
          /FAILED
          SZA
          HALT /AC=000000
          /ERROR; AC BITS 5-17 NOT 0
          /LAW 760000 FAILED
          /TEST LAW 760000, AC=ONES
          /AC=ONES, L=0
          CLA:CM:CLL
          LAW 00000 /AC=760000
          SZL
E181, HALT /ERROR; LINK NOT A 0, LAW SET LINC
          RAL
          SNL:CLL /AC=740000
          /L=1
E182, HALT /ERROR; AC BIT 0 NOT A 1, LAW 760000 FAILED
          RAL
          SNL:CLL /AC=700000
          /L=1
E183, HALT /ERROR; AC BIT 1 NOT A 1, LAW 760000 FAILED

```

```

RAL          /AC =600000
SNL:CLL     /L=1
E184, HALT   /ERROR; AC BIT 2 NOT A 1, LAW 76000 FAILED
RAL          /AC=400000
SNL:CLL     /L=1
E185, HALT   /ERROR; AC BIT 3 NOT A 1, LAW 760000 FAILED
RAL          /AC=000000
SNL:CLL     /L=1
E186, HALT   /ERROR; AC BIT 4 NOT A 1, LAW 760000 FAILED
SZA         /AC=000000
E187, HALT   /ERROR; AC BITS 5-17 NOT 0
            /LAW 760000 FAILED
```

```

/TEST LAW 770000, AC BIT 5
/AC=0
CLA:CLL          /AC=770000
LAW 10000
RTL             /AC=740001
RTL             /AC=600007
RTL             /AC=000037
SMA
E188, HALT      /ERROR; AC BIT 5 NOT A 1, LAW 770000 FAILED

/TEST LAW 764000, AC BIT 6
/AC=0
CLA:CLL          /AC=764000
LAW 4000
RTL             /AC=720001
RTL             /AC=500007
RTL             /AC=100037
SMA
E189, HALT      /ERROR; AC BIT 6 NOT A 1, LAW 764000 FAILED

/TEST LAW 762000, AC BIT 7
/AC=0
CLA:CLL          /AC=762000
LAW 2000
RAL             /AC=741000
RTL             /AC=620003
RTL             /AC=100017
RTL             /AC=400076
SMA
E190, HALT      /ERROR -AC BIT 7 NOT A 1, LAW 762000 FAILED

/TEST LAW 761000, AC BIT 8
/AC=0
CLA:CLL          /AC=761000
LAW 1000
RTL             /AC=704001
RTL             /AC=420007
RTL             /AC=100037
RTL             /AC=400174
SMA
E191, HALT      /ERROR; AC BIT 8 NOT A 1, LAW 761000 FAILED

```

```

                                /TEST LAW 760400, AC BIT 9
                                /AC=0
CLA:CLL                        /AC=760400
LAW 400                        /AC=741000
RAL                             /AC=604003
RTL                             /AC=020017
RTL                             /AC=100076
RTL                             /AC=400370
SMA
E192, HALT                     /ERROR: AC BIT 9 NOT A 1, LAW 760400 FAILED

                                /TEST LAW 760200, AC BIT 10
                                /AC=0
CLA:CLL                        /AC=760200
LAW 200                        /AC=701001
RTL                             /AC=404007
RTL                             /AC=020037
RTL                             /AC=100174
RTL                             /AC=400760
SMA
E193, HALT                     /ERROR: AC BIT 10 NOT A 1, LAW 760200 FAILED

                                /TEST LAW 760100, AC BIT 11
                                /AC=0
CLA:CLL                        /AC=760100
LAW 100                        /AC=740200
RAL                             /AC=601003
RTL                             /AC=004017
RTL                             /AC=020076
RTL                             /AC=100370
RTL                             /AC=401740
SMA
E194, HALT                     /ERROR: AC BIT 11 NOT A 1, LAW 760100 FAILED
```

```
CLA:CLL      /TEST LAW 760040, AC BIT 12
LAW 40       /AC=0
RTL         /AC=760040
RTL         /AC=700201
RTL         /AC=401007
RTL         /AC=004037
RTL         /AC=020174
RTL         /AC=100760
RTL         /AC=403700
SMA
E195, HALT   /ERROR; AC BIT 12 NOT A 1, LAW 760040 FAILED

CLA:CLL      /TEST LAW 760020, AC BIT 13
LAW 20       /AC=0
RAL         /AC=760020
RTL         /AC=740040
RTL         /AC=600203
RTL         /AC=001017
RTL         /AC=004076
RTL         /AC=020370
RTL         /AC=101740
RTL         /AC=407600
SMA
E196, HALT   /ERROR; AC BIT 13 NOT A 1, LAW 760020 FAILED

CLA:CLL      /TEST LAW 760010, AC BIT 14
LAW 10       /AC=0
RTL         /AC=760010
RTL         /AC=700041
RTL         /AC=400207
RTL         /AC=001037
RTL         /AC=004174
RTL         /AC=020760
RTL         /AC=103700
RTL         /AC=417400
SMA
E197, HALT   /ERROR; AC BIT 14 NOT A 1, LAW 760010 FAILED
```



```

          /TEST LAW 760004, AC BIT 15
CLA:CLL  /AC=0
LAW 4    /AC=760004
RAL      /AC=740010
RTL      /AC=600043
RTL      /AC=000217
RTL      /AC=001076
RTL      /AC=004370
RTL      /AC=021740
RTL      /AC=107600
RTL      /AC=437000
SMA
E198,    HALT          /ERROR: AC BIT 15 NOT A 1, LAW 760004 FAILED

          /TEST LAW 760002, AC BIT 16
CLA:CLL  /AC=0
LAW 2    /AC=760002
RTL      /AC=700011
RTL      /AC=400047
RTL      /AC=000237
RTL      /AC=001174
RTL      /AC=004760
RTL      /AC=023700
RTL      /AC=117400
RTL      /AC=476000
SMA
E199,    HALT          /ERROR: AC BIT 16 NOT A 1, LAW 760002 FAILED

          /TEST LAW 760001, AC BIT 17
CLA:CLL  /AC=0
LAW 1    /AC=760001
RAL      /AC=740002
RTL      /AC=600013
RTL      /AC=000057
RTL      /AC=000276
RTL      /AC=001370
RTL      /AC=005740
RTL      /AC=027600
RTL      /AC=137000
RTL      /AC=574000
SMA
E200,    HALT          /ERROR: AC BIT 17 NOT A 1, LAW 60001 FAILED

```

```

/TEST LAW 767777, AC BIT 5
CLA:CLL:CML /AC=0, L=1
RTR /AC=200K
RTR /AC=40K
RTR /C=10K
CLL:CML /AC=767777
LAW 7777
RTL /AC=737777
RTL /AC=577777
RTL /L=0
SZL:OMA /AC=0
E201, HALT /ERROR; AC BIT 5 NOT A 0, LAW 767777 FAILED
SZL /AC=0
E202, HALT /ERROR; AC DROPPED A BIT, LAW 767777 FAILED

/TEST LAW 773777, AC BIT 6
CLA:CLL:CML /AC=0, L=1
RAR /AC=400K
RTR /AC=100K
RTR /AC=20K
RTR /AC=4K
CLL:CML /AC=773777
LAW 13777
RAL /AC=767777
RTL /AC=737777
RTL /AC=577777
RTL /L=0
SZL:OMA /AC=0
E203, HALT /ERROR; AC BIT 6 NOT A 0, LAW 773777 FAILED
SZL /AC=0
E204, HALT /ERROR; AC DROPPED A BIT, LAW 773777 FAILED

```

```

/TEST LAW 775777, AC BIT 7
CLA:CLL:CML /AC=0, L=1
RTR /AC=200K
RTR /AC=40K
RTR /AC=10K
RTR /AC=2K
CLL:CML
LAW 15777 /AC=775777
RTL /AC=767777
RTL /AC=737777
RTL /AC=577777
RTL /L=0
SZL:CMA /AC=0
E205, HALT /ERROR; AC BIT 7 NOT A 0, LAW 775777 FAILED
SZA
E206, HALT /ERROR; AC DROPPED A BIT, LAW 775777 FAILED

```

```

/TEST LAW 776777, AC BIT 8
1767 CLA:CLL:CML /AC=0, L=1
RAR1770 /AC=400K
RTR /AC=100K
RTR /AC=20K
RTR /AC=4K
RTR /AC=1K
CLL:CML
LAW 16777 /AC=776777
RAL /AC=775777
RTL2000 /AC=767777
RTL /AC=737777
RTL /AC=577777
RTL /L=0
SZL:CMA /AC=0
E207, HALT /ERROR; AC BIT 8 NOT A 0, LAW 776777 FAILED
SZA
E208, HALT2007 /ERROR; AC DROPPED A BIT, LAW 776777 FAILED

```

```

/TEST LAW 777377, AC BIT 9
CLA:CLL:CML /AC=0, L=1
RTR /AC=200K
RTR /AC=40K
RTR /AC=10K
RTR /AC=2K
RTR /AC=400

```

```

CLL:OML
LAW 17377          /AC=777377
RTL                /AC=775777
RTL                /AC=767777
RTL                /AC=737777
RTL                /AC=577777
RTL                /L=0
SZL:OMA           /AC=0
E209, HALT        /ERROR; AC BIT 9 NOT A 0, LAW 777377 FAILED
SZA
E210, HALT        /ERROR; AC DROPPED A BIT, LAW 777377 FAILED

/TEST LAW 777577, AC BIT 10
CLA:CLL:OML      /AC=0, L=1
RAR              /AC=400K
RTR              /AC=100K
RTR              /AC=20K
RTR              /AC=4K
RTR              /AC=1K
RTR              /AC=200

CLL:OML
LAW 17577          /AC=777577
RAL              /AC=777377
RTL              /AC=775777
RTL              /AC=767777
RTL              /AC=737777
RTL              /AC=577777
RTL              /L=0
SZL:OMA           /AC=0
E211, HALT        /ERROR; AC BIT 10 NOT A 0, LAW 777577 FAILED
SZA
E212, HALT        /ERROR; AC DROPPED A BIT, LAW 777577 FAILED

```

```

/TEST LAW 777677, AC BIT 11
CLA:CLL:CML /AC=0, L=1
RTR /AC=200K
RTR /AC=40K
RTR /AC=10K
RTR /AC=2K
RTR /AC=400
RTR /AC=100
CLL:CML
LAW 17677 /AC=777677
RTL /AC=777377
RTL /AC=775777
RTL /AC=767777
RTL /AC=737777
RTL /AC=577777
RTL /L=0
SZL:CHA /AC=0
E213, HALT /ERROR; AC BIT 11 NOT A 0, LAW 777677 FAILED
SZL /AC=0
E214, HALT /ERROR; AC DROPPED A BIT, LAW 777677 FAILED

/TEST LAW 777737, AC BIT 12
CLA:CLL:CML /AC=0, L=1
RAR /AC=400K
RTR /AC=100K
RTR /AC=20K
RTR /AC=4K
RTR /AC=1K
RTR /AC=200
RTR /AC=40
CLL:CML
LAW 17737 /AC=777737
RAL /AC=777677
RTL /AC=777377
RTL /AC=775777
RTL /AC=767777
RTL /AC=737777
RTL /AC=577777
RTL /L=0
SZL:CHA /AC=0
E215, HALT /ERROR; AC BIT 12 NOT A 0, LAW 777737 FAILED
SZL /AC=0
E216, HALT /ERROR; AC DROPPED A BIT, LAW 777737 FAILED

```

```

          /TEST LAW 77757, AC BIT 13
CLA:CLL:CML /AC=0, L=1
RTR /AC=200K
RTR /AC=40K
RTR /AC=10K
RTR /AC=2K
RTR /AC=400
RTR /AC=100
RTR /AC=20
CLL:CML
LAW 17757 /AC=77757
RTL /AC=777677
RTL /AC=777377
RTL /AC=775777
RTL /AC=767777
RTL /AC=737777
RTL /AC=577777
RTL /L=0
SEL:DMA /AC=0
E217, HALT /ERROR; AC BIT 13 NOT A0, LAW 77757 FAILED
      SZA
E218, HALT /ERROR; AC DROPPED A BIT, LAW 77757 FAILED

          /TEST LAW 77767, AC BIT 14
CLA:CLL:CML /AC=0, L=1
RAR /AC=400K
RTR /AC=100K
RTR /AC=20K
RTR /AC=4K
RTR /AC=1K
RTR /AC=200
RTR /AC=40
RTR /AC=10
CLL:CML
LAW 17767 /AC=77767
RAL /AC=77757
RTL /AC=777677
RTL /AC=777377
RTL /AC=775777
RTL /AC=767777
RTL /AC=737777
RTL /AC=577777
RTL /L=0
SEL:DMA /AC=0
E219, HALT /ERROR; AC BIT 14 NOT 10, LAW 77767 FAILED
      SZA
E220, HALT /ERROR; AC DROPPED A BIT, LAW 77767 FAILED

```

```

/TEST LAW 77773, AC BIT 15
CLA:CLL:CML /AC=0, L=1
RTR /AC=200K
RTR /AC=40K
RTR /AC=10K
RTR /AC=2K
RTR /AC=400
RTR /AC=100
RTR /AC=20
RTR /AC=4
CLL:CML
LAW 17773 /AC=77773
RTL /AC=77757
RTL /AC=77677
RTL /AC=77377
RTL /AC=77577
RTL /AC=76777
RTL /AC=73777
RTL /AC=57777
RTL /L=0
SZL:CMA /AC=0
E221, HALT /ERROR: AC BIT 15 NOT A 0, LAW 77773 FAILED
SZL /AC=0
E222, HALT /ERROR: AC DROPPED A BIT, LAW 77773 FAILED

```

```

/TEST LAW 77775, AC BIT 16
CLA:CLL:CML /AC=0, L=1
RAR /AC=400K
RTR /AC=100K
RTR /AC=20K
RTR /AC=4K
RTR /AC=1K
RTR /AC=200
RTR /AC=40
RTR /AC=10
RTR /AC=2
CLL:CML
LAW 17775 /AC=77775
RAL /AC=77773
RTL /AC=77757
RTL /AC=77677
RTL /AC=77377
RTL /AC=77577
RTL /AC=76777
RTL /AC=73777
RTL /AC=57777
RTL /L=0
SZL:CMA /AC=0
E223, HALT /ERROR: AC BIT 16 NOT A 0, LAW 77775 FAILED
SZL /AC=0
E224, HALT /ERROR: AC DROPPED A BIT, LAW 77775 FAILED

```

```
CLL:CLL:CML      /TEST LAW 777776, AC BIT 17
RTR              /AC=0, L=1
RTR              /AC=200K
RTR              /AC=40K
RTR              /AC=10K
RTR              /AC=2K
RTR              /AC=400
RTR              /AC=100
RTR              /AC=20
RTR              /AC=4
RTR              /AC=1
CLL:CML
LAW 17776        /AC=777776
RTL              /AC=777773
RTL              /AC=777757
RTL              /AC=777677
RTL              /AC=777377
RTL              /AC=775777
RTL              /AC=767777
RTL              /AC=737777
RTL              /AC=577777
RTL              /L=0
SZL:OMA         /AC=0
E225, HALT      /ERROR; AC BIT 17 NOT A 0, LAW 777776 FAILED
SZL             /AC=0
E226, HALT      /ERROR; AC DROPPED A BIT, LAW 777776 FAILED
START
```


/PDP-9 INST TEST - PART 2
/TAPE 3

		/TEST LAC 0	
		CLA:CLL:CML	/AC=0
		LAC K0	/000000
		SZA	
2314	E226A,	HALT	/ERROR; AC NOT 0 LAC /FAILED
		SNL	
2316	E226B,	HALT	/ERROR; LINK NOT 1 AFIER /A LAC K0
			/TEST LAC K0, AC BIT 0
		CLA:CLL:CML	/AC=0, L=1
		RAR	/AC=400K
		LAC K0	/000000
		SZA	
E226C,	HALT		/ERROR; AC BIT 0 NOT 0 /AFTER LAC K0
			/TEST LAC K0, AC BIT 1.
		CLA:CLL:CML	/AC=0, L=1
		RTR	/AC=200K
		LAC K0	/000000
		SZA	
E226D,	HALT		/ERROR; AC BIT 1 NOT 0. /AFTER LAC K0
			/TEST LAC K0, AC BIT 2.
		CLA:CLL:CML	/AC=0, L=1
		RTR	/AC=200K
		RAR	/AC=100K
		LAC K0	/000000
		SZA	
E226E,	HALT		/ERROR; AC BIT 2 NOT 0. /AFTER LAC K0

```

          /TEST LAC K0, AC BIT3
CLA:CLL:CML /AC=0, L=1
RTR         /AC=200K
RTR         /AC=40K
LAC K0     /000000
SZA
E227, HALT  /ERROR; AC BIT 3 NOT 0, LAC K0 FAILED

          /TEST LAC K0, AC BIT4
CLA:CLL:CML /AC=0, L=1
RTR         /AC=200K
RTR         /AC=40K
RAR         /AC=20K
LAC K0     /000000
SZA
E228, HALT  /ERROR; AC BIT 4 NOT 0, LAC K0 FAILED

          /TEST LAC K0, AC BIT5
CLA:CLL:CML /AC=0, L=1
RTR         /AC=200K
RTR         /AC=40K
RTR         /AC=10K
LAC K0     /000000
SZA
E229, HALT  /ERROR; AC BIT 5 NOT 0
          /LAC K0 FAILED

          /TEST LAC K0, AC BIT 6
CLA:CLL:CML /AC=0, L=1
RTR         /AC=200K
RTR         /AC=40K
RTR         /AC=10K
RAR         /AC=4K
LAC K0     /000000
SZA
E230, HALT  /ERROR; AC BIT 6 NOT 0
          /LAC K0 FAILED

          /TEST LAC K0, AC BIT7
CLA:CLL:CML /AC=0, L=1
RTR         /AC=200K
RTR         /AC=40K
RTR         /AC=10K
RTR         /AC=2K
LAC K0     /000000
SZA
E231, HALT  /ERROR; AC BIT 7 NOT 0, LAC K0 FAILED

```

```

                                /TEST LAC K0, AC BIT 3
CLA:OLL:CML                    /AC=0, L=1
RTR                             /AC=200K
RTR                             /AC=40K
RTR                             /AC=10K
RTR                             /AC=2K
RAR                             /AC=1K
LAC K0                          /000000
SZA
E232, HALT                      /ERROR; AC BIT 8 NOT 0, AC K0 FAILED

                                /TEST LAC K0, AC BIT9
CLA:OLL:CML                    /AC=0, L=1
RTR                             /AC=200K
RTR                             /AC=40K
RTR                             /AC=10K
RTR                             /AC=2K
RTR                             /AC=400
LAC K0                          /000000
SZA
E233, HALT                      /ERROR; AC BIT 9 NOT 0, LAC K0 FAILED

                                /TEST LAC K0, AC BIT10
CLA:OLL:CML                    /AC=0, L=1
RTR                             /AC=200K
RTR                             /AC=40K
RTR                             /AC=10K
RTR                             /AC=2K
RTR                             /AC=400
RAR                             /AC=200
LAC K0                          /000000
SZA
E234, HALT                      /ERROR; AC BIT 10 NOT 0, LAC K0 FAILED

                                /TEST LAC K0, AC BIT11
CLA:OLL:CML                    /AC=0, L=1
RTR                             /AC=200K
RTR                             /AC=40K
RTR                             /AC=10K
RTR                             /AC=2K
RTR                             /AC=400
RTR                             /AC=100
LAC K0                          /000000
SZA
E235, HALT                      /ERROR; AC BIT 11 NOT 0 LAC K0 FAILED

```

```

          /TEST LAC K0, AC BIT 12
CLA:CLL:CML /AC=0, L=1
RTR         /AC=200K
RTR         /AC=40K
RTR         /AC=10K
RTR         /AC=2K
RTR         /AC=400
RTR         /AC=100
RAR         /AC=40
LAC K0     /000000
SZA
E236, HALT /ERROR: AC BIT 12 NOT 0, LAC K0 FAILED

```

```

          /TEST LAC K0, AC BIT 13
CLA:CLL:CML /AC=0, L=1
RTR         /AC=200K
RTR         /AC=40K
RTR         /AC=10K
RTR         /AC=2K
RTR         /AC=400
RTR         /AC=100
RTR         /AC=20
LAC K0     /000000
SZA
E237, HALT /ERROR: AC BIT 13 NOT 0, LAC K0 FAILED

```

```

          /TEST LAC K0, AC BIT 14
CLA:CLL:CML /AC=0, L=1
RTR         /AC=200K
RTR         /AC=40K
RTR         /AC=10K
RTR         /AC=2K
RTR         /AC=400
RTR         /AC=100
RTR         /AC=20
RAR         /AC=10
LAC K0     /000000
SZA
E238, HALT /ERROR: AC BIT 14 NOT 0, LAC K0 FAILED

```

```

          /TEST LAC K0, AC BIT 15
CLA:CLL:CML /AC=0, L=1
RTR /AC=200K
RTR /AC=40K
RTR /AC=10K
RTR /AC=2K
RTR /AC=400
RTR /AC=100
RTR /AC=20
RTR /AC=4
LAC K0 /000000
SZA
E239, HALT /ERROR; AC BIT 5 NOT 0, LAC K0 FAILED

          /TEST LAC K0, AC BIT15
CLA:CLL:CML /AC=0, L=1
RTR /AC=200K
RTR /AC=40K
RTR /AC=10K
RTR /AC=2K
RTR /AC=400
RTR /AC=100
RTR /AC=20
RTR /AC=4
RAR /AC=2
LAC K0 /000000
SZA
E240, HALT /ERROR; AC BIT 16 NOT 0, LAC K0 FAILED

          /TEST LAC K0, AC BIT17
CLA:CLL:CML /AC=0, L=1
RTR /AC=200K
RTR /AC=40K
RTR /AC=10K
RTR /AC=2K
RTR /AC=400
RTR /AC=100
RTR /AC=20
RTR /AC=4
RTR /AC=1
LAC K0 /000000
SZA
E241, HALT /ERROR; AC BIT 17 NOT 0, LAC K0 FAILED

```

```

          CLA:DMA:CLL      /TEST LAC K0 AC=ONES
          LAC K0          /AC=ONES, L=0
          SZA            /000000
E242,    HALT            /ERROR; AC NOT 0, LAC K0 FAILED

          CLA:DMA:CLL:CML /TEST LAC K0, AC=ONES, L=1
          LAC K0          /AC=ONES, L=1
          SNL            /000000
E243,    HALT            /ERROR; LINK NOT 1, LAC K0 FAILED

          CLA:DMA:CLL      /TEST LAC K0, AC=ONES, L=0
          LAC K0          /AC=ONES, L=0
          SZL
E244,    HALT            /ERROR; LINK NOT 1, LAC K0 FAILED

          CLA:CLL          /TEST LAC K400K, AC BIT0
          LAC K400K       /AC=0, L=0
          RAL            /400K
          SNL            /L=1
E245,    HALT            /ERROR; AC BIT0 NOT 1, LAC K400K FAILED
          SZA
E246,    HALT            /ERROR; AC PICKED A BIT, LAC K400K FAILED

          CLA:CLL          /TEST LAC K200K; AC BIT1
          LAC K200K       /AC=0, L=0
          RTL            /200K
          SNL            /L=1
E247,    HALT            /ERROR; AC BIT 1 NOT 1, LAC K200K FAILED
          SZA
E248,    HALT            /ERROR; AC PICKED A BIT, LAC K200K, FAILED

```

	CLA:CLL	/TEST LAC K100K, AC BIT 2
	LAC K100K	/AC=0, L=0
	RTL	/100K
	RAL	/AC=400K
	SNL	/L=1
E249,	HALT	/ERROR; AC BIT 2 NOT 1, LAC K100K, FAILED
E250,	HALT	/ERROR; AC PICKED A BIT, LAC K100K FAILED
	CLA:CLL	/TEST LAC K40K, AC BIT 3
	LAC K40K	/AC=0, L=0
	RTL	/40K
	RAL	/AC=200K
	SNL	/L=1
E251,	HALT	/ERROR; AC PICKED A BIT, LAC K40K FAILED
E252,	HALT	/ERROR; AC BIT 3 NOT 1, LAC K40K FAILED
	CLA:CLL	/TEST LAC K20K, AC BIT 4
	LAC K20K	/AC=0, L=0
	RTL	/20K
	RAL	/AC=100K
	SNL	/AC=400K
	HALT	/L=1
E253,	HALT	/ERROR; AC BIT 4 NOT 1, LAC K20K FAILED
E254,	HALT	/ERROR; AC PICKED A BIT, LAC K20K
	CLA:CLL	/TEST LAC K10K, AC BIT 5
	LAC K10K	/AC=0, L=0
	RTL	/10K
	RAL	/AC=40K
	SNL	/AC=200K
	HALT	/L=1
E255,	HALT	/ERROR; AC BIT 5 NOT 1, LAC K10K FAILED
E256,	HALT	/ERROR; AC PICKED A BIT, LAC K10K FAILED

```

          /TEST LAC K4K, AC BITS
          /AC=0, L=0
          /4K
          RTL /AC=20K
          RTL /AC=100K
          RTL /AC=400K
          RAL /L=1
E257,   HALT /ERROR; AC BIT 6 NOT 1, LAC K4K FAILED
          SZA
E258,   HALT /ERROR; AC PICKED A BIT, LAC K4K FAILED

          /TEST LAC K2K, AC BIT7
          /AC=0, L=0
          /2K
          RTL /AC=10K
          RTL /AC=40K
          RTL /AC=200K
          RTL /L=1
E259,   HALT /ERROR; AC BIT 7 NOT 1 LAC K2K FAILED
          SZA
E260,   HALT /ERROR; AC PICKED A BIT, LAC K2K FAILED

          /TEST LAC K1K, AC BITS
          /AC=0, L=0
          /1K
          RTL /AC=4K
          RTL /AC=20K
          RTL /AC=100K
          RTL /AC=400K
          RAL /L=1
E261,   HALT /ERROR; AC PICKED A BIT, LAC K1K
          SZA
E262,   HALT /ERROR; AC PICKED A BIT, LAC K1K
          /FAILED

```



```

          /TEST LAC K400, AC BIT 9
          /AC=0, L=0
          /400
CLA:CLL
LAC K400
RTL      /AC=2K
RTL      /AC=10K
RTL      /AC=40K
RTL      /AC=200K
RTL      /L=1
SNL
E263,    HALT      /ERROR; AC BIT 9 NOT 1, LAC K400 FAILED
          SZA
E264,    HALT      /ERROR; AC PICKED A BIT; LAC K400
          /FAILED

          /TEST LAC K200, AC BIT 10
          /AC=0, L=0
          /200
CLA:CLL
LAC K200
RTL      /AC=1K
RTL      /AC=4K
RTL      /AC=20K
RTL      /AC=100K
RTL      /AC=400K
RAL
SNL
E265,    HALT      /ERROR; AC BIT 10 NOT 1, LAC K200 FAILED
          SZA
E266,    HALT      /ERROR; AC PICKED A BIT, LAC K200 FAILED

          /TEST LAC K100, AC BIT 11
          /AC=0, L=0
          /100
CLA:CLL
LAC K100
RTL      /AC=400
RTL      /AC=2K
RTL      /AC=10K
RTL      /AC=40K
RTL      /AC=200K
RTL      /L=1
SNL
E267,    HALT      /ERROR; AC BIT 11 NOT 1, LAC K100 FAILED
          SZA
E268,    HALT      /ERROR; AC PICKED A BIT, LAC K100 FAILED

```

```

          /TEST LAC K40, AC BIT 12
          /AC=0, L=0
          /40
          /AC=200
          /AC=1K
          /AC=4K
          /AC=20K
          /AC=100K
          /AC=400K
          /L=1
E269,  HALT          /ERROR; AC BIT 12 NOT 1, LAC K40 FAILED
          SZA
E270,  HALT          /ERROR; AC PICKED A BIT, LAC K40 FAILED

          /TEST LAC K20, AC BIT 13
          /AC=0, L=0
          /20
          /AC=100
          /AC=400
          /AC=2K
          /AC=10K
          /AC=40K
          /AC=200K
          /L=1
E271,  HALT          /ERROR; AC BIT 13 NOT 1, LAC K20 FAILED
          SZA
E272,  HALT          /ERROR; AC PICKED A BIT, LAC K20 FAILED

          /TEST LAC K10, AC BIT 14
          /AC=0, L=0
          /10
          /AC=40
          /AC=200
          /AC=1K
          /AC=4K
          /AC=20K
          /AC=100K
          /AC=400K
          /L=1
E273,  HALT          /ERROR; AC BIT 14 NOT 1, LAC K10 FAILED
          SZA
E274,  HALT          /ERROR; AC PICKED A BIT, LAC K10 FAILED

```

```

          /TEST LAC K4, AC BIT 15
          /AC=0, L=0
CLA:CLL  /4
LAC K4   /AC=20
RTL      /AC=100
RTL      /AC=400
RTL      /AC=2K
RTL      /AC=10K
RTL      /AC=40K
RTL      /AC=200K
RTL      /L=1
SNL
E275.    HALT      /ERROR; AC BIT 15 NOT 1, LAC K4 FAILED
          SZA
E276.    HALT      /ERROR; AC PICKED A BIT, LAC K4 FAILED

          /TEST LAC K2, AC BIT 16
          /AC=0, L=0
CLA:CLL  /2
LAC K2   /AC=10
RTL      /AC=40
RTL      /AC=200
RTL      /AC=1K
RTL      /AC=4K
RTL      /AC=20K
RTL      /AC=100K
RTL      /AC=400K
RAL      /L=1
SNL
E277.    HALT      /ERROR; AC BIT 16 NOT 1, LAC K2 FAILED
          SZA
E278.    HALT      /ERROR; AC PICKED A BIT, LAC K2 FAILED

          /TEST LAC K1, AC BIT 17
          /AC=0, L=0
CLA:CLL  /1
LAC K1   /4
RTL      /20
RTL      /100
RTL      /400
RTL      /2K
RTL      /10K
RTL      /40K
RTL      /200K
RTL      /L=1

```

```

SNL
E279,  HALT          /ERROR; AC BIT 17 NOT 1, LAC F1 FAILED
      SZA
E280,  HALT          /ERROR; AC PICKED A BIT, LAC K1 FAILED

      /TEST LAC M400K, AC BIT 0
      CLA:CLL:CML    /L=1
      RAR            /AC=400K
      CLL:CML
      LAC M400K      /AC=377777
      RAL            /L=0
      SZL:CMA
E281,  HALT          /ERROR; AC BIT 0 NOT 0, LAC M400K FAILED
      SZA
E282,  HALT          /ERROR; AC DROPPED A BIT, LAC M400 K1
      /FAILED

      /TEST LAC M200K AC BIT 1
      CLL:CML:CLA    /L=1
      RTR            /AC=200K
      CLL:CML
      LAC M200K      /AC=577777
      RTL            /L=0
      SZL:CMA
E283,  HALT          /ERROR; AC BIT 1 NOT 0 LAC M200K FAILED
      SZA
E284,  HALT          /ERROR; AC DROPPED A BIT, LAC M200K FAILED

      /TEST LAC M100K, AC BIT 2
      CLL:CML:CLA    /L=1
      RTR            /AC=200K
      RAR            /AC=100K
      CLL:CML
      LAC M100K      /AC=677777
      RTL            /AC=377777
      RAL            /L=0
      SZL:CMA
E285,  HALT          /ERROR; AC BIT 2 NOT 0, LAC M100K FAILED
      SZA
E286,  HALT          /ERROR; AC DROPPED A BIT, LAC M100K
      /FAILED

```

```

          /TEST LAC M40K, AC BIT 3
          /L=1
          /AC=200K
          /AC=40K
          /AC=737777
          /AC=577777
          /L=0
E287, HALT /ERROR; AC BIT 3 NOT 0, LAC M40K FAILED
      SZA
E288, HALT /ERROR; AC DROPPED A BIT LAC M40K

          /TEST LAC M20K, AC BIT 4
          /L=1
          /AC=200K
          /AC=40K
          /AC=20K
          /AC=757777
          /AC=677777
          /AC=377777
          /L=0
E289, HALT /ERROR; AC BIT 4 NOT 0, LAC M20K FAILED
      SZA
E290, HALT /ERROR; AC DROPPED A BIT,
          /LAC M20K FAILED

          /TEST LAC M10K, AC BIT 5
          /L=1
          /AC=200K
          /AC=40K
          /AC=10K
          /AC=767777
          /AC=737777
          /AC=577777
          /L=0
E291, HALT /ERROR; AC BIT 5 NOT 0, LAC M10K FAILED
      SZA
E292, HALT /ERROR; AC DROPPED A BIT LAC M10K FAILED

```

```

          CLL:CML:CLA      /TEST LAC M4K, AC BIT 6
          RTR              /L=1
          RTR              /AC=200K
          RTR              /AC=40K
          RTR              /AC=10K
          RAR              /AC=4K
          CLL:CML
          LAC M4K          /AC=773777
          RTL              /AC=757777
          RTL              /AC=677777
          RTL              /AC=377777
          RAL              /L=0
E293,    HALT              /ERROR: AC BIT 6 NOT 0, LAC M4K FAILED
          SZA
E294,    HALT              /ERROR: AC DROPPED A BIT, LAC M4K FAILED

          CLL:CML:CLA      /TEST LAC M2K, AC BIT 7
          RTR              /L=1
          RTR              /AC=200K
          RTR              /AC=40K
          RTR              /AC=10K
          RTR              /AC=2K
          CLL:CML
          LAC M2K          /AC=775777
          RTL              /AC=767777
          RTL              /AC=737777
          RTL              /AC=577777
          RTL              /L=0
E295,    HALT              /ERROR: AC BIT 7 NOT 0, LAC M2K FAILED
          SZA
E296,    HALT              /ERROR: AC DROPPED A BIT, LAC M2K FAILED

```

```

                                /TEST LAC M1K, AC BIT 8
CLL:CML:CLA                    /L=1
RTR                             /AC=200K
RTR                             /AC=40K
RTR                             /AC=10K
RTR                             /AC=2K
RAR                             /AC=1K
CLL:CML
LAC M1K                         /AC=776777
RTL                             /AC=773777
RTL                             /AC=757777
RTL                             /AC=677777
RTL                             /AC=377777
RAL                             /L=0
E297, HALT                      /ERROR; AC BIT 8 NOT 0 LAC M1K FAILED
SZL:CMA
E298, HALT                      /ERROR; AC DROPPED A BIT, LAC M1K FAILED

                                /TEST LAC M400, AC BIT 9
CLL:CML:CLA                    /L=1
RTR                             /AC=200K
RTR                             /AC=40K
RTR                             /AC=10K
RTR                             /AC=2K
RTR                             /AC=400
CLL:CML
LAC M400                        /AC=777377
RTL                             /AC=775777
RTL                             /AC=767777
RTL                             /AC=737777
RTL                             /AC=577777
RAL                             /L=0
E299, HALT                      /ERROR; AC BIT 9 NOT 0, LAC M400 FAILED
SZL:CMA
E300, HALT                      /ERROR; AC DROPPED A BIT, LAC M400 FAILED

```

```

          /TEST LAC M200, AC BIT 10
CLL:CML:CLA /L=1
RTR /AC=200K
RTR /AC=40K
RTR /AC=10K
RTR /AC=2K
RTR /AC=400
RAR /AC=200
CLL:CML
LAC M200 /AC=777577
RTL /AC=776777
RTL /AC=773777
RTL /AC=757777
RTL /AC=677777
RTL /AC=377777
RAL /L=0
SZL:CMA
E301, HALT /ERROR; AC BIT 10 NOT 0, LAC M200 FAILED
      SZA
E302, HALT /ERROR; AC DROPPED A BIT, LAC M200 FAILED

          /TEST LAC M100, AC BIT 11
CLL:CML:CLA /L=1
RTR /AC=200K
RTR /AC=40K
RTR /AC=10K
RTR /AC=2K
RTR /AC=400
RTR /AC=100
CLL:CML
LAC M100 /AC=777677
RTL /AC=777377
RTL /AC=775777
RTL /AC=767777
RTL /AC=737777
RTL /AC=577777
RTL /L=0
SZL:CMA
E303, HALT /ERROR; AC BIT 11 NOT 0, LAC M100 FAILED
      SZA
E304, HALT /ERROR; AC DROPPED A BIT, LAC M100 FAILED

```



```

                                /TEST LAC M40, AC BIT 12
CLL:CML:CLA                    /L=1
RTR                             /AC=200K
RTR                             /AC=40K
RTR                             /AC=10K
RTR                             /AC=2K
RTR                             /AC=400
RTR                             /AC=100
RAR                             /AC=40
CLL:CML
LAC M40                         /AC=777737
RTL                             /AC=777577
RTL                             /AC=776777
RTL                             /AC=773777
RTL                             /AC=757777
RTL                             /AC=677777
RTL                             /AC=377777
RAL                             /L=0
SZL:CMA
E305, HALT                      /ERROR; AC BIT 12 NOT 0, LAC M40 FAILED
SZL
E306, HALT                      /ERROR; AC DROPPED A BIT, LAC M40 FAILED

                                /TEST LAC M20, AC BIT 13
CLA:CLL:CML                    /L=1
RTR                             /AC=200K
RTR                             /AC=40K
RTR                             /AC=10K
RTR                             /AC=2K
RTR                             /AC=400
RTR                             /AC=100
RTR                             /AC=20
CLL:CML
LAC M20                         /AC=777757
RTL                             /AC=777677
RTL                             /AC=777377
RTL                             /AC=775777
RTL                             /AC=767777
RTL                             /AC=737777
RTL                             /AC=577777
RTL                             /L=0
SZL:CMA
E307, HALT                      /ERROR; AC BIT 13 NOT 0, LAC M20 FAILED
SZL
E308, HALT                      /ERROR; AC DROPPED A BIT, LAC M20 FAILED

```

```

                                /TEST LAC M10, AC BIT 14
CLA:CLL:CML                    /L=1
RTR                             /AC=200K
RTR                             /AC=40K
RTR                             /AC=10K
RTR                             /AC=2K
RTR                             /AC=400
RTR                             /AC=100
RTR                             /AC=20
RAR                             /AC=10
CLL:CML
LAC M10                         /AC=777767
RTL                             /AC=777737
RTL                             /AC=777577
RTL                             /AC=776777
RTL                             /AC=773777
RTL                             /AC=757777
RTL                             /AC=677777
RTL                             /AC=377777
RAL                             /L=0
SZL:DMA
E309, HALT                      /ERROR, AC BIT 14 NOT 0, LAC M100 FAILED
SZA
E310, HALT                      /ERROR; AC DROPPED A BIT, LAC M10 FAILED

```

```

                                /TEST LAC M4, AC BIT 15
CLA:CLL:CML                    /L=1
RTR                             /AC=200K
RTR                             /AC=40K
RTR                             /AC=10K
RTR                             /AC=2K
RTR                             /AC=400
RTR                             /AC=100
RTR                             /AC=20
RTR                             /AC=4
CLL:CML
LAC M4                          /AC=777773
RTL                             /AC=777757
RTL                             /AC=777677
RTL                             /AC=777377
RTL                             /AC=775777
RTL                             /AC=767777
RTL                             /AC=737777
RTL                             /AC=577777
RTL                             /L=0

```

```

SZL:OMA
E311, HALT /ERROR: AC BIT 15 NOT 0, LAC M4 FAILED
      SZA
E312, HALT /ERROR: AC DROPPED A BIT, LAC M4 FAILED

      /TEST LAC M2, AC BIT 16
CLA:OLL:CML /L=1
RTR /AC=200K
RTR /AC=40K
RTR /AC=10K
RTR /AC=2K
RTR /AC=400
RTR /AC=100
RTR /AC=20
RTR /AC=4
RAR /AC=2
OLL:CML
LAC M2 /AC=77775
RTL /AC=77767
RTL /AC=77737
RTL /AC=77757
RTL /AC=77677
RTL /AC=77377
RTL /AC=75777
RTL /AC=67777
RTL /AC=37777
RAL /L=0
SZL:OMA
E313, HALT /ERROR: AC BIT 16 NOT 0, LAC M2 FAILED
      SZA
E314, HALT /ERROR: AC DROPPED A BIT, LAC M2 FAILED

```

```
          /TEST LAC M1, AC BIT 17
CLA:CLL:CML /L=1
RTR        /AC=200K
RTR        /AC=40K
RTR        /AC=10K
RTR        /AC=2K
RTR        /AC=400
RTR        /AC=100
RTR        /AC=20
RTR        /AC=4
RTR        /AC=1
CLL:CML
LAC M1     /AC=777776
RTL        /AC=777773
RTL        /AC=777757
RTL        /AC=777677
RTL        /AC=777377
RTL        /AC=775777
RTL        /AC=767777
RTL        /AC=737777
RTL        /AC=577777
RTL        /L=0
E315, HALT /ERROR: AC BIT 17 NOT 0, LAC M1 FAILED
      SZA
E316, HALT /ERROR: AC DROPPED A BIT, LAC M1 FAILED
START
```

/INSTRUCTION TEST TAPE 4

	CLA	/TEST AND K0, AC=0
	AND K0	/AC=0
	SZA	/0
E316A,	HALT	/ERROR, AC NOT 0 AND K0 FAILED
3572	LAC K400K	/TEST AND K0, AC=400K
	AND K0	/AC=400K
	SZA	/0
3575 E316B,	HALT	/ERROR, AC BIT 0 NOT 0, AND K0 FAILED
	LAC K200K	/TEST AND K0, AC=200K
	AND K0	/AC=200K
	SZA	/0
E316C,	HALT	/ERROR, AC BIT 1 NOT A 0, AND K0 FAILED
	LAC K100K	/TEST AND K0, AC=100K
	AND K0	/AC=100K
	SZA	/0
E316D,	HALT	/ERROR, AC BIT 2 NOT A 0, AND K0 FAILED
	LAC K40K	/TEST AND K0, AC=40K
	AND K0	/AC=40K
	SZA	/0
E316E,	HALT	/ERROR, AC BIT 3 NOT A 0, AND K0 FAILED
	LAC K20K	/TEST AND K0, AC=20K
	AND K0	/AC=20K
	SZA	/0
E316F,	HALT	/ERROR, AC BIT 4 NOT A 0, AND K0 FAILED

	LAC K10K	/TEST AND K0, AC=10K
	AND K0	/AC=10K
	SZA	/0
E316G,	HALT	/ERROR, AC BIT 5 NOT A 0, AND K0 FAILED
	LAC K4K	/TEST AND K0, AC=4K
	AND K0	/AC=4K
	SZA	/0
E316H,	HALT	/ERROR, AC BIT 6 NOT A 0, AND K0 FAILED
	LAC K2K	/TEST AND K0, AC=2K
	AND K0	/AC=2K
	SZA	/0
E316I,	HALT	/ERROR, AC BIT 7 NOT A 0, AND K0 FAILED
	LAC K1K	/TEST AND K0, AC=1K
	AND K0	/AC=1K
	SZA	/0
E316J,	HALT	/ERROR, AC BIT 8 NOT A 0, AND K0 FAILED
	LAC K400	/TEST AND K0, AC=400
	AND K0	/AC=400
	SZA	/0
E317,	HALT	/ERROR, AC BIT 9 NOT A 0, AND K0 FAILED
	LAC K200	/TEST AND K0, AC=200
	AND K0	/AC=200
	SZA	/0
E318,	HALT	/ERROR, AC BIT 10 NOT A 0, AND K0 FAILED

```

E319, LAC <100      /TEST AND K0, AC=100
      AND <0        /AC=100
      SZA           /0
      HALT         /ERROR, AC BIT 11 NOT A 0, AND K0 FAILED

E320, LAC <40      /TEST AND K0, AC=40
      AND <0        /AC=40
      SZA           /0
      HALT         /ERROR, AC BIT 12 NOT A 0, AND K0 FAILED

E321, LAC <20      /TEST AND K0, AC=20
      AND <0        /AC=20
      SZA           /0
      HALT         /ERROR; AC BIT 13 NOT A 0, AND K

```

FAILED

```

E322, LAC <10      /TEST AND K0, AC=10
      AND <0        /AC=10
      SZA           /0
      HALT         /ERROR, AC BIT 14 NOT A 0, AND K0 FAILED

E323, LAC <4       /TEST AND K0, AC=4
      AND <0        /AC=4
      SZA           /0
      HALT         /ERROR, AC BIT 15 NOT A 0, AND K0 FAILED

E324, LAC <2       /TEST AND K0, AC=2
      AND <0        /AC=2
      SZA           /0
      HALT         /ERROR, AC BIT 16 NOT A 0, AND K0 FAILED

```

```

LAC K0
AND K0
SZA
E325, HALT /TEST AND K0, AC=1
          /AC=1
          /0
          /ERROR, AC BIT 17 NOT A 0, AND K0 FAILED

LAC K0
AND K400K
SZA
E326, HALT /TEST AND K400K, AC=0
          /AC=0
          /400K
          /ERROR, AC NOT 0 AND K400K FAILED

LAC K0
AND K200K
SZA
E327, HALT /TEST AND K200K, AC=0
          /AC=0
          /200K
          /ERROR, AC NOT 0, AND 200K FAILED

LAC K0
AND K100K
SZA
E328, HALT /TEST AND K100K, AC=0
          /AC=0
          /100K
          /ERROR, AC NOT 0, AND K100K FAILED

LAC K0
AND K40K
SZA
E329, HALT /TEST AND K40K, AC=0
          /AC=0
          /40K
          /ERROR, AC NOT 10, AND K40K FAILED

LAC K0
AND K20K
SZA
E330, HALT /TEST AND K20K, AC=0
          /AC=0
          /20K
          /ERROR, AC NOT 0, AND K20, FAILED

```


E331,	LAC K0 AND K10K SZA HALT	/TEST AND K10K, AC=0 /AC=0 /10K /ERROR, AC NOT 0, AND K10K FAILED
E332,	LAC K0 AND K4K SZA HALT	/TEST AND K4K, AC=0 /AC=0 /4K /ERROR, AC NOT 0 AND K4K FAILED
E333,	LAC K0 AND K2K SZA HALT	/TEST AND K2K, AC=0 /AC=0 /2K /ERROR, AC NOT 0 AND K2K FAILED
E334,	LAC K0 AND K1K SZA HALT	/TEST AND K1K, AC=0 /AC=0 /1K /ERROR, AC NOT 0 AND K1K FAILED
E335,	LAC K0 AND K400 SZA HALT	/TEST AND K400, AC=0 /AC=0 /400 /ERROR, AC NOT 0 AND 400 FAILED
E336,	LAC K0 AND K200 SZA HALT	/TEST AND K200, AC=0 /AC=0 /200 /ERROR, AC NOT 0, AND K200 FAILED

```

LAC K0
AND K100
SZA
E337, HALT
/TEST AND K100, AC=0
/AC=0
/100
/ERROR, AC NOT 0, AND K100 FAILED

LAC K0
AND K40
SZA
E338, HALT
/TEST AND K40, AC=0
/AC=0
/40
/ERROR, AC NOT 0, AND K40 FAILED

LAC K0
AND K20
SZA
E339, HALT
/TEST AND K20, AC=0
/AC=0
/20
/ERROR, AC NOT 0, AND K20 FAILED

LAC K0
AND K10
SZA
E340, HALT
/TEST AND K10, AC=0
/AC=0
/10
/ERROR, AC NOT 0, AND K10 FAILED

LAC K0
AND K4
SZA
E341, HALT
/TEST AND K4, AC=0
/AC=0
/4
/ERROR, AC NOT 0, AND K4 FAILED

LAC K0
AND K2
SZA
E342, HALT
/TEST AND K2, AC=0
/AC=0
/2
/ERROR, AC NOT 0, AND K2 FAILED
```

	LAC K0 AND K1 SZA	/TEST AND K1, AC=0 /AC=0 /1
E343,	HALT	/ERROR, AC NOT 0, AND K1 FAILED
	LAC M400K AND K400K SZA	/TEST AND K400K, AC=M400K /AC=377777 /400K
E344,	HALT	/ERROR, AC NOT 0, AND K400K FAILED
	LAC M200K AND K200K SZA	/TEST AND K200K, AC=M200K /AC=577777 /200K
E345,	HALT	/ERROR, AC NOT 0, AND K200K FAILED
	LAC M100K AND K100K SZA	/TEST AND K100K, AC=M100K /AC=677777 /100K
E346,	HALT	/ERROR, AC NOT 0, AND K100K FAILED
	LAC M40K AND K40K SZA	/TEST AND K40K, AC=M40K /AC=737777 /40K
E347,	HALT	/ERROR, AC NOT 0, AND K40, FAILED
	LAC M20K AND K20K SZA	/TEST AND K20K, AC=M20K /AC=757777 /20K
E348,	HALT	/ERROR, AC NOT 0, AND K20K FAILED

```
LAW 7777      /TEST AND K10K, AC=M10K
AND K10K      /AC=767777
SZA           /10K
E349, HALT    /ERROR, AC NOT 0, AND K10K FAILED

LAW 13777    /TEST AND K4K, AC=M4K
AND K4K      /AC=773777
SZA           /4K
E350, HALT    /ERROR; AC NOT 0, AND K4K FAILED

LAW 15777    /TEST AND K2K, AC=M2K
AND K2K      /AC=775777
SZA           /2K
E351, HALT    /ERROR, AC NOT 0, AND K2K FAILED

LAW 16777    /TEST AND K1K, AC=M1K
AND K1K      /AC=776777
SZA           /1K
E352, HALT    /ERROR, AC NOT 0, AND K1K FAILED

LAW 17377    /TEST AND K400, AC=M400
AND K400     /AC=777377
SZA           /400
E353, HALT    /ERROR; AC NOT 0, AND K400 FAILED

LAW 17577    /TEST AND K200, AC=M200
AND K200     /AC=777577
SZA           /200
E354, HALT    /ERROR, AC NOT 0, AND K200 FAILED
```

```

LAW 17677      /TEST AND K100, AC=M100
AND K100      /AC=777677
SZA          /100
E355, HALT    /ERROR; AC NOT 0, AND K100 FAILED

LAW 17737      /TEST AND K40, AC=M40
AND K40      /AC=777737
SZA          /40
E356, HALT    /ERROR, AC NOT 0, AC=K40 FAILED

LAW 17757      /TEST AND K20, AC=M20
AND K20      /AC=777757
SZA          /20
E357, HALT    /AC NOT 0, AND K20 FAILED

LAW 17767      /TEST AND K10, AC=M10
AND K10      /AC=777767
SZA          /10
E358, HALT    /ERROR, AC NOT 0, AND K10 FAILED

LAW 17773      /TEST AND K4, AC=M4
AND K4      /AC=777773
SZA          /4
E359, HALT    /ERROR, AC NOT 0, AND K4 FAILED

LAW 17775      /TEST AND K2, AC=K2
AND K2      /AC=777775
SZA          /2
E360, HALT    /ERROR, AC NOT 0, AND K2 FAILED
```

E361,	LAW 17776 AND K1 SZA HALT	/TEST AND K1, AC=K1 /AC=777776 /1 /ERROR, AC NOT 0, AND K1 FAILED
E362,	CLA: CMA LAC K400K AND M400K SZA HALT	/TEST AND M400K, AC=K400K /AC=ONES /AC=400K /377777 /ERROR, AC NOT 0, AND M400K FAILED
E363,	CLA: CMA LAC K200K AND M200K SZA HALT	/TEST AND M200K, AC=K200K /AC=ONES /AC=200K /577777 /ERROR, AC NOT 0, AND M200K FAILED
E364,	CLA: CMA LAC K100K AND M100K SZA HALT	/TEST AND M100K, AC=K100K /AC=ONES /AC=100K /677777 /ERROR, AC NOT 0, AND M40K FAILED
E365,	CLA: CMA LAC K40K AND M40K SZA HALT	/TEST AND M40K, AC=K40K /AC=ONES /AC=40K /737777 /ERROR, AC NOT 0, AND M40K FAILED
E366,	CLA: CMA LAC K20K AND M20K SZA HALT	/TEST AND M20K, AC=K20K /AC=ONES /AC=20K /757777 /ERROR, AC NOT 0, AND M20K FAILED

	CLA: CMA	/TEST AND M10K, AC=K10K
	LAC K10K	/AC=ONES
	AND M10K	/AC=10K
	SZA	/767777
E367,	HALT	/ERROR, AC NOT 0, AND M10, FAILED
	CLA: CMA	/TEST AND M4K, AC=K4K
	LAC K4K	/AC=ONES
	AND M4K	/AC=4K
	SZA	/773777
E368,	HALT	/ERROR, AC NOT 0, AND M4K FAILED
	CLA: CMA	/TEST AND M2K, AC=K2K
	LAC K2K	/AC=ONES
	AND M2K	/AC=2K
	SZA	/775777
E369,	HALT	/ERROR, AC NOT 0, AND M2K FAILED
	CLA: CMA	/TEST AND M1K, AC=K1K
	LAC K1K	/AC=ONES
	AND M1K	/AC=1K
	SZA	/776777
E370,	HALT	/ERROR, AC NOT 0, AND M1K FAILED
	CLA: CMA	/TEST AND M400K, AC=K400
	LAC K400	/AC=ONES
	AND M400	/AC=400
	SZA	/777377
E371,	HALT	/ERROR, AC NOT 0, AND M400 FAILED
	CLA: CMA	/TEST AND M200, AC=K200
	LAC K200	/AC=ONES
	AND M200	/AC=200
	SZA	/777577
E372,	HALT	/ERROR, AC NOT 0, AND M200 FAILED

E373,	CLA:DMA LAC K100 AND M100 SZA HALT	/TEST AND M100, AC=K100 /AC=ONES /AC=100 /777677	/ERROR, AC NOT 0, AND M100 FAILED
E374,	CLA:DMA LAC K40 AND M40 SZA HALT	/TEST AND M40, AC=K40 /AC=ONES /AC=40 /777737	/ERROR, AC NOT 0, AND M40 FAILED
E375,	CLA:DMA LAC K20 AND M20 SZA HALT	/TEST AND M20, AC=K20 /AC=ONES /AC=20 /777757	/ERROR, AC NOT 0, AND M20 FAILED
E376,	CLA:DMA LAC K10 AND M10 SZA HALT	/TEST AND M10, AC=K10 /AC=ONES /AC=10 /777767	/ERROR, AC NOT 0, AND M10 FAILED
E377,	CLA:DMA LAC K4 AND M4 SZA HALT	/TEST AND M4, AC=K4 /AC=ONES /AC=4 /777773	/ERROR, AC NOT 0, AND M4 FAILED

	CLA:OMA	/TEST AND M2, AC=K2
	LAC <2	/AC=ONES
	AND M2	/AC=2
	SZA	/777775
E378,	HALT	/ERROR, AC NOT 0, AND M2 FAILED
	CLA:OMA	/TEST AND M1, AC=K1
	LAC <1	/AC=ONES
	AND M1	/AC=1
	SZA	/777776
E379,	HALT	/ERROR, AC NOT 0, AND M1 FAILED
	LAC <400K	/TEST AND K400K, BIT 0
	AND <400K	/AC=400K
	SMA:CLL	/400K
E380,	HALT	/ERROR, BIT 0 NOT A 1, AND K400K FAILED
	LAC <200K	/TEST AND K200K, BIT 1
	AND <200K	/AC=200K
	RTL	/200K
	SNL:CLL	/L=1
E381,	HALT	/ERROR, BIT 1 NOT A 1, AND K200, FAILED
	LAC <100K	/TEST AND K100K, BIT 2
	AND <100K	/AC=100K
	RTL	/100K
	SMA:CLL	/AC=400K
E382,	HALT	/ERROR, BIT 2 NOT A 1, AND K100, FAILED

```

E383,  LAC K40K      /TEST AND K40K, BIT 3
        AND K40K      /AC=40K
        RTL           /40K
        RTL           /AC=200K
        SNL:CLL       /L=1
        HALT          /ERROR, BIT 3 NOT A 1, AND K40K FAILED

E384,  LAC K20K      /TEST AND K20K, BIT 4
        AND K20K      /AC=20K
        RTL           /20K
        RTL           /AC=100K
        SMA:CLL       /AC=400K
        HALT          /ERROR, BIT 4 NOT A 1, AND K200K FAILED

E385,  LAC K10K      /TEST AND K10K, BIT 5
        AND K10K      /AC=10K
        RTL           /10K
        RTL           /AC=40K
        RTL           /AC=200K
        SNL:CLL       /L=1
        HALT          /ERROR, BIT 5 NOT A 1, AND K10, FAILED

E386,  LAC K4K       /TEST AND K4K, BIT 6
        AND K4K       /AC=4K
        RTL           /4K
        RTL           /AC=20K
        RTL           /AC=100K
        SMA:CLL       /AC=400K
        HALT          /ERROR, BIT 6 NOT A 1, AND K4K FAILED

E387,  LAC K2K       /TEST AND K2K, BIT 7
        AND K2K       /AC=2K
        RTL           /2K
        RTL           /AC=10K
        RTL           /AC=40K
        RTL           /AC=200K
        SNL:CLL       /L=1
        HALT          /ERROR, BIT 7 NOT A 1, AND K2K FAILED

```

```

LAC <1K          /TEST AND <1K, BIT 8
AND <1K          /AC=1K
RTL             /1K
RTL             /AC=4K
RTL             /AC=20K
RTL             /AC=100K
RTL             /AC=400K
SMA:OLL
E388, HALT      /ERROR, BIT 8 NOT 1A, AND K1K FAILED

LAC <400         /TEST AND <400, BIT 9
AND <400         /AC=400
RTL             /400
RTL             /AC=2K
RTL             /AC=10K
RTL             /AC=40K
RTL             /AC=200K
RTL             /L=1
SNA:OLL
E389, HALT      /ERROR, BIT 9 NOT A 1, AND K400 FAILED

LAC <200         /TEST AND <200, BIT 10
AND <200         /AC=200
RTR             /200
RTR             /AC=40
RTR             /AC=10
RTR             /AC=2
RTR             /L=1
SNA:OLL
E390, HALT      /ERROR, BIT 10 NOT A 1, AND K200 FAILED

LAC <100         /TEST AND <100, BIT 11
AND <100         /AC=100
RTR             /100
RTR             /AC=20
RTR             /AC=4
RTR             /AC=1
RTR             /AC=400K
SMA:OLL
E391, HALT      /ERROR, BIT 11 NOT A 1, AND K100 FAILED

```

```

LAC K40          /TEST AND K40, BIT 12
AND K40          /AC=40
RTR              /40
RTR              /AC=10
RTR              /AC=2
RTR              /L=1
SNL:CLL
E392, HALT       /ERROR, BIT 12 NOT A 1, AND K40 FAILED

LAC K20          /TEST AND K20, BIT 13
AND K20          /AC=20
RTR              /20
RTR              /AC=4
RTR              /AC=1
RTR              /AC=400K
SMA:CLL
E393, HALT       /ERROR, BIT 13 NOT A 1, AND K20 FAILED

LAC K10          /TEST AND K10, BIT 14
AND K10          /AC=10
RTR              /10
RTR              /AC=2
RTR              /L=1
SNL:CLL
E394, HALT       /ERROR, BIT 14 NOT A 1, AND K10 FAILED

LAC K4           /TEST AND K4, BIT 15
AND K4           /AC=4
RTR              /4
RTR              /AC=1
RTR              /AC=400K
SMA:CLL
E395, HALT       /ERROR, BIT 15 NOT A 1, AND K4 FAILED

```

	LAC K2	/TEST AND K2, BIT 16
	AND K2	/AC=2
	RTR	/2
	SNL:CLL	/L=1
E396,	HALT	/ERROR, BIT 16 NOT A 1, AND K2 FAILED
	LAC K1	/TEST AND K1, BIT 17
	AND K1	/AC=1
	RTR	/1
	SMA:CLL	/AC=400K
E397,	HALT	/ERROR, BIT 17 NOT A 1, AND K1 FAILED
	CLA:DMA:CLL:CML	/TEST AND M400K, AC=ONES
	AND M400K	/AC=ONES, L=1
	RAL	/377777
	SZL:DMA	/AC=ONES
E398,	HALT	/L=0, AC=0
	SZA	/ERROR BIT 0 NOT 0, AND M400K FAILED
E399,	HALT	/ERROR, AC DROPPED A BIT, AND M400K FAILED
	CLA:DMA:CLL:CML	/TEST AND M200K, AC=ONES
	AND M200K	/AC=ONES, L=1
	RTL	/AC=577777
	SZL:DMA	/AC=ONES
E400,	HALT	/L=0, AC=0
	SZA	/ERROR, BIT 1 NOT A 0, AND M200 FAILED
E401,	HALT	/ERROR, AC DROPPED A BIT, AND M200K FAILED
	CLA:DMA:CLL:CML	/TEST AND M100K, AC=ONES
	AND M100K	/AC=ONES, L=1
	RTL	/AC=677777
	RAL	/AC=377777
	SZL:DMA	/AC=ONES
E402,	HALT	/L=0, AC=0
		/ERROR, BIT 2 NOT A 0, AND M100K FAILED

```

E403,   SPA
        HALT           /ERROR, AC DROPPED A BIT AND M100K FAILED

                        /TEST AND M40, AC=ONES
CLA:OMA:CLL:CML /TEST AND M40, AD=ONES
AND M40K        /AC=737777
RTL           /AC=577777
RTL           /AC=ONES
SZL:OMA       /L=0, AC=0
E404,   HALT           /ERROR, BIT3 NOT A 0, AND M40K FAILED
        SZA
E405,   HALT           /ERROR, AC DROPPED A BIT, AND M40K FAILED

                        /TEST AND M20K, AC=ONES
CLA:OMA:CLL:CML /AC=ONES, L=1
AND M20K        /AC=757777
RTL           /AC=677777
RAL           /AC=577777
RTL           /AC=ONES
SZL:OMA       /L=0, AC=0
E406,   HALT           /ERROR, BIT4 NOT A 0, AND M20K FAILED
        SZA
E407,   HALT           /ERROR, AC DROPPED A BIT, AND M20K FAILED

                        /TEST AND M10K, AC=ONES
CLA:OMA:CLL:CML /AC=ONES, L=1
AND M10K        /AC=767777
RTL           /AC=737777
RTL           /AC=577777
RTL           /AC=ONES
SZL:OMA       /AC=0, L=0
E408,   HALT           /ERROR, BIT 5 NOT A 0, AND M10K FAILED
        SZA
E409,   HALT           /ERROR, AC DROPPED A BIT, AND M20F FAILED

```

```

          /TEST AND M4K, AC=ONES
CLA:OMA:CLL:CML /AC=ONES, L=1
AND M4K        /AC=773777
RTL           /AC=757777
RTL           /AC=677777
RAL           /AC=577777
RTL           /AC=ONES
SZL:OMA       /AC=0, L=0
E410, HALT    /ERROR, BIT 6 NOT A 0, AND M4K FAILED
        SZA
E411, HALT    /ERROR, AC DROPPED A BIT, AND M4K FAILED

          /TEST AND M2K, AC=ONES
CLA:OMA:CLL:CML /TEST AND M2K, AC=ONES
AND M2K        /AC=775777
RTL           /AC=767777
RTL           /AC=737777
RTL           /AC=577777
RTL           /AC=ONES
SZL:OMA       /AC=0, L=0
E412, HALT    /ERROR, BIT7 NOT A 0, AND M2K FAILED
        SZA
E413, HALT    /ERROR, AC DROPPED A BIT, AND M2K FAILED

          /TEST AND M1K, AC=ONES
CLA:OMA:CLL:CML /AC=ONES, L=1
AND M1K        /AC=776777
RTL           /AC=773777
RTL           /AC=757777
RTL           /AC=677777
RAL           /AC=577777
RTL           /AC=ONES
SZL:OMA       /AC=0, L=0
E414, HALT    /ERROR, BIT8 NOT A 0, AND M1K FAILED
        SZA
E415, HALT    /ERROR, AD DROPPED A BIT, AND M1K FAILED

          /TEST AND M400, AC=ONES
CLA:OMA:CLL:CML /AC=ONES, L=1
AND M400       /AC=777377
RTR           /AC=777677
RAR           /AC=777737
RTR           /AC=777767
RTR           /AC=777775

```

```

RTR /AC=ONES
SZL:OMA /AC=0, L=0
E416, HALT /ERROR, BIT 9 NOT A 0, AND M400 FAILED
SZA
E417, HALT /ERROR, AC DROPPED A BIT, AND M400 FAILED

/TEST AND M200, AC=ONES
CLA:OMA:CLL:CML /AC=ONES, L=1
AND M200 /AC=777577
RTR /AC=77737
RTR /AC=77767
RTR /AC=77775
RTR /AC=ONES
SZL:OMA /AC=0, L=0
E418, HALT /ERROR, BIT 10 NOT A 0, AND M200 FAILED
SZA
E419, HALT /ERROR, AC DROPPED A BIT, AND M200 FAILED

/TEST AND M100, AC=ONES
CLA:OMA:CLL:CML /AC=ONES, L=1
AND M100 /AC=777677
RTR /AC=77757
RTR /AC=77773
RAR /AC=77775
RTR /AC=ONES
SZL:OMA /AC=0, L=0
E420, HALT /ERROR, BIT 11 NOT A 0, AND M100 FAILED
SZA
E421, HALT /ERROR, AD DROPPED A BIT, AND M100 FAILED

/TEST AND M40, AC=ONES
CLA:OMA:CLL:CML /AC=ONES, L=1
AND M40 /AC=77737
RTR /AC=77767
RTR /AC=77775
RTR /AC=ONES
SZL:OMA /AC=0, L=0
E422, HALT /ERROR, BIT 12 NOT A 0, AND M40 FAILED

```



```

E423,  SZA
        HALT                /ERROR, AC DROPPED A BIT, AND M40 FAILED

                                /TEST AND M20, AC=ONES
CLA: CMA: CLL: CML /AC=ONES, L=1
AND M20           /AC=777757
RTR              /AC=777773
RAR              /AC=777775
RTR              /AC=ONES
SZL: CMA         /AC=0, L=0
E424,  HALT                /ERROR; BIT 13 NOT A 0, AND M20 FAILED
        SZA
E425,  HALT                /ERROR, BIT 13 NOT A 0, AND M20 FAILED

                                /TEST AND M10, AC=ONES
CLA: CMA: CLL: CML /AC=ONES, L=1
AND M10           /AC=777767
RTR              /AC=777775
RTR              /AC=ONES
SZL: CMA         /AC=0, L=0
E426,  HALT                /ERROR; BIT 14 NOT A 0, AND M10 FAILED
        SZA
E427,  HALT                /ERROR; AC DROPPED A BIT, AND M10 FAILED

```

```

                                /TEST AND M4, AC=ONES
CLA:CMA:CLL:CML /AC=ONES, L=1
AND M4 /AC=777773
RAR /AC=777775
RTR /AC=ONES
E428, SZL:CMA /AC=0, L=0
      HALT /ERROR; BIT 15 IS NOT A 0, AND M4 FAILED
      SZA
E429, HALT /ERROR; AC DROPPED A BIT, AND M4 FAILED

                                /TEST AND M2, AC=ONES
CLA:CMA:CLL:CML /AC=ONES, L=1
AND M2 /AC=777775
RTR /AC=ONES
E430, SZL:CMA /AC=0, L=0
      HALT /ERROR; BIT 16 NOT A 0, AND M2 FAILED
      SZA
E431, HALT /ERROR; AC DROPPED A BIT, AND M2 FAILED
START
```

/INST TEST TAPE 5

```

                                /TEST AND M1, AC=ONES
                                /AC=ONES, L=1
                                /AC=777776
                                /AC=ONES
                                /AC=0, L=0
E432,  CLLA:CMA:CLL:CML /ERROR; BIT 17 NOT A 0, AND M1 FAILED
                                /L=1
                                /AC=377777
                                /AC=ONES
                                /AC=ONES
                                /AC=0, L=0
E433,  CLLA:CMA:CLL:CML /ERROR; AC DROPPED A BIT, AND M1 FAILED
                                /L=1
                                /AC=577777
                                /AC=ONES
                                /AC=ONES
                                /AC=0, L=0
E434,  CLLA:CMA:CLL:CML /ERROR; BIT 0 NOT A 0, AND K7S FAILED
                                /L=1
                                /AC=677777
                                /AC=ONES
                                /AC=ONES
                                /AC=0, L=0
E435,  CLLA:CMA:CLL:CML /ERROR; AC DROPPED A BIT, AND K7S FAILED
                                /L=1
                                /AC=577777
                                /AC=ONES
                                /AC=ONES
                                /AC=0, L=0
E436,  CLLA:CMA:CLL:CML /ERROR; BIT 1 NOT A 0, AND K7S FAILED
                                /L=1
                                /AC=677777
                                /AC=ONES
                                /AC=ONES
                                /AC=0, L=0
E437,  CLLA:CMA:CLL:CML /ERROR; AC DROPPED A BIT, AND K7S FAILED
                                /L=1
                                /AC=677777
                                /AC=ONES
                                /AC=ONES
                                /AC=0, L=0
E438,  CLLA:CMA:CLL:CML /ERROR; BIT 2 NOT A 0, AND K7S FAILED
                                /L=1
                                /AC=677777
                                /AC=ONES
                                /AC=ONES
                                /AC=0, L=0
E439,  CLLA:CMA:CLL:CML /ERROR; AC DROPPED A BIT, AND K7S FAILED
                                /L=1
                                /AC=677777
                                /AC=ONES
                                /AC=ONES
                                /AC=0, L=0

```

	CLL:CML	/TEST AND K7S, AC=M40K
	LAC M40K	/L=1
	AND K7S	/AC=737777
	RTL	/AC=ONES
	RTL	/AC=577777
	RTL	/AC=ONES
E440,	SZL:CMA	/AC=0, L=0
	HALT	/ERROR; BIT 3 NOT A 0, AND K7S FAILED
E441,	SZA	
	HALT	/ERROR; AC DROPPED A BIT, AND K7S FAILED
	CLL:CML	/TEST AND K7S, M20K
	LAC M20K	/L=1
	AND K7S	/AC=757777
	RAL	/AC=ONES
	RTL	/AC=737777
	RTL	/AC=577777
	RTL	/AC=ONES
E442,	SZL:CMA	/AC=0, L=0
	HALT	/ERROR; BIT 4 NOT A 0, AND K7S FAILED
	SZA	
E443,	HALT	/ERROR; AC DROPPED A BIT, AND K7S FAILED
	CLL:CML	/TEST AND K7S, M10K
	LAC M10K	/L=1
	AND K7S	/AC=767777
	RTL	/AC=ONES
	RTL	/AC=737777
	RTL	/AC=577777
	RTL	/AC=ONES
E444,	SZL:CMA	/AC=0, L=0
	HALT	/ERROR; BIT 5 NOT A 0, AND K7S FAILED
	SZA	
E445,	HALT	/ERROR; AC DROPPED A BIT, AND K7S FAILED
	CLL:CML	/TEST AND K7S, M4K
	LAC M4K	/L=1
	AND K7S	/AC=773777
	RAL	/AC=ONES
	RTL	/AC=767777
	RTL	/AC=737777
	RTL	/AC=577777
	RTL	/AC=ONES
E446,	SZL:CMA	/AC=0, L=0
	HALT	/ERROR; BIT 6 NOT A 0, AND K7S FAILED
	SZA	
E447,	HALT	/ERROR; AC DROPPED A BIT AND K7S FAILED

	CLL: CML	/TEST AND K7S, M2K
	LAC 42K	/L=1
	AND K7S	/AC=775777
	RTL	/AC=ONES
	RTL	/AC=763777
	RTL	/AC=737777
	RTL	/AC=577777
	RTL	/AC=ONES
	SZL: CMA	/AC=0, L=0
E448,	HALT	/ERROR; BIT 7 NOT A 0, AND K7S FAILED
E449,	HALT	/ERROR; AC DROPPED A BIT, AND K7S FAILED
	CLL: CML	/TEST AND K7S, M1K
	LAC 41K	/L=1
	AND K7S	/AC=776777
	RAL	/AC=ONES
	RTL	/AC=775777
	RTL	/AC=767777
	RTL	/AC=737777
	RTL	/AC=577777
	RTL	/AC=ONES
	SZL: CMA	/AC=0, L=0
E450,	HALT	/ERROR; BIT 8 NOT A 0, AND K7S FAILED
E451,	HALT	/ERROR; AC DROPPED A BIT, AND K7S FAILED
	CLL: CML	/TEST AND K7S, M400
	LAC 400	/L=1
	AND K7S	/AC=777377
	RAR	/AC=ONES
	RTR	/AC=777577
	RTR	/AC=77737
	RTR	/AC=77767
	RTR	/AC=77775
	RTR	/AC=ONES
	SZL: CMA	/AC=0, L=0
E452,	HALT	/ERROR; BIT 9 NOT A 0, AND K7S FAILED
E453,	HALT	/ERROR; AC DROPPED A BIT, AND K7S FAILED

```

                                /TEST AND K7S, M200
                                /L=1
                                /AC=777577
OCL:OCL
LAC M200
AND K7S
RTR
RTR
RTR
RTR
RTR
RTR
RTR
RTR
SZA:OMA
E454, HALT
SZA
E455, HALT

                                /TEST AND K7S, M100
                                /L=1
                                /AC=777677
OCL:OCL
LAC M100
AND K7S
RAR
RTR
RTR
RTR
RTR
RTR
RTR
RTR
SZA:OMA
E456, HALT
SZA
E457, HALT

                                /TEST AND K7S, M40
                                /L=1
                                /AC=777737
OCL:OCL
LAC M40
AND K7S
RTR
RTR
RTR
RTR
RTR
RTR
RTR
RTR
SZA:OMA
E458, HALT
SZA
E459, HALT
```

	CLL!CML	/TEST AND K7S, M20
	LAC M20	/L=1
	AND K7S	/AC=777757
	RAR	/AC=ONES
	RTR	/AC=777767
	RTR	/AC=777775
	RTR	/AC=ONES
	SZL!CMA	/AC=0, L=0
E460,	HALT	/ERROR: BIT 13 NOT A 0, AND K7S FAILED
	SZA	
E461,	HALT	/ERROR: AC DROPPED A BIT, AND K7S FAILED
		/TEST AND K7S, M10
	CLL!CML	/L=1
	LAC M10	/AC=777767
	AND K7S	/AC=ONES
	RTR	/AC=777775
	RTR	/AC=ONES
	SZL!CMA	/AC=0, L=0
E462,	HALT	/ERROR: BIT 14 NOT A 0, AND K7S FAILED
	SZA	
E463,	HALT	/ERROR: AC DROPPED A BIT, AND K7S FAILED
		/TEST AND K7S, M4
	CLL!CML	/L=1
	LAC M4	/AC=777773
	AND K7S	/AC=ONES
	RAR	/AC=777775
	RTR	/AC=ONES
	SZL!CMA	/AC=0, L=0
E464,	HALT	/ERROR: BIT 15 NOT A 0, AND K7S FAILED
	SZA	
E465,	HALT	/ERROR: AC DROPPED A BIT, AND K7S FAILED

```

                                /TEST AND K7S, M2
                                /L=1
                                /AC=777775
                                /AC=ONES
                                /AC=ONES
                                /AC=0, L=0
E466,  HALT                    /ERROR; BIT 16 NOT A 0, AND K7S FAILED
                                SZA
E467,  HALT                    /ERROR; AC DROPPED A BIT, AND K7S FAILED
```

```

                                /TEST AND K7S, M1
                                /L=1
                                /AC=777776
                                /AC=ONES
                                /AC=ONES
                                /AC=0, L=0
E468,  HALT                    /ERROR; BIT 17 NOT A J, AND K7S FAILED
                                SZA
E469,  HALT                    /ERROR; AC DROPPED A BIT, AND K7S FAILED
START
```


/TAPE 5 PART 2
/XOR, TAD, ADD

	CLA	/TEST XOR 0, AC=0
	XOR 00	/AC=0
	SZA	/0
E470,	HALT	/ERROR; AC NOT 0, XOR 0 FAILED
	CLA: CMA: CLL	/TEST XOR K0S, AC=400<
	LAC 400K	/AC=ONES, L=0
	XOR 00	/AC=400K
	RAL	/0
	SNL	/AC=0
E471,	HALT	/L=1, AC=0
	SZA	/ERROR; BIT 0 NOT A 1 XOR K0S
E472,	HALT	/FAILED
	CLA: CMA: CLL	/TEST XOR K0S, AC=200<
	LAC 200K	/AC=ONES, L=0
	XOR 00	/AC=200K
	RTL	/AC=10
	SNL	/AC=0
E473,	HALT	/L=1, AC=0
	SZA	/ERROR; BIT 1 NOT A 1, XOR K0S
5201 E474,	HALT	/FAILED
	CLA: CMA: CLL	/TEST XOR K0S, AC=100<
	LAC 100K	/AC=ONES, L=0
	XOR 00	/AC=100K
	RTL	/0
	RAL	/AC=400K
	SNL	/AC=0
5202 5203 5204 5205 5206 5207 5210 E475,	HALT	/L=1, AC=0
	SZA	/ERROR; BIT 2 NOT A 1, XOR K0S
E476,	HALT	/FAILED
	SZA	/ERROR; AC PICKED A BIT, XOR K0S
	HALT	/FAILED

```

          /TEST XOR K0S, AC=40K
CLA!CMA!CLL /AC=ONES, L=0
LAC K40K      /AC=40K
XOR K0       /0
RTL         /AC=200K
RTL         /AC=0
SNL        /L=1, AC=0
E477, HALT  /ERROR; BIT 3 NOT A 1, XOR K0S
          /FAILED
          SZA
E478, HALT  /ERROR; AC PICKED A BIT, XOR K0S
          /FAILED

          /TEST XOR K0S, AC=20K
CLA!CMA!CLL /AC=ONES, L=0
LAC K20K      /AC=20K
XOR K0       /0
RTL         /AC=100K
RTL         /AC=400K
RAL         /AC=0
SNL        /L=1, AC=0
E479, HALT  /ERROR; BIT 4 NOT A 1, XOR K0S
          /FAILED
          SZA
E480, HALT  /ERROR; AC PICKED A BIT, XOR K0S
          /FAILED

          /TEST XOR K0S, AC=10K
CLA!CMA!CLL /AC=ONES, L=0
LAC K10K      /AC=10K
XOR K0       /0
RTL         /AC=40K
RTL         /AC=200K
RTL         /AC=0
SNL        /L=1, AC=0
E481, HALT  /ERROR; BIT 5 NOT A 1, XOR K0S
          /FAILED
          SZA
E482, HALT  /ERROR; AC PICKED A BIT, XOR K0S
          /FAILED

```

```

          /TEST XOR K0S, AC=4K
CLA: CMA: CLL /AC=ONES, L=0
LAC K4K /AC=4K
XOR K0 /0
RTL /AC=20K
RTL /AC=100K
RTL /AC=400K
RAL /AC=0
SNL /L=1, AC=0
E483, HALT /ERROR; BIT 6 NOT A 1, XOR K0S
          /FAILED

          SZA
E484, HALT /ERROR; AC PICKED A BIT, XOR K0S
          /FAILED

          /TEST XOR K0S, AC=2K
CLA: CMA: CLL /AC=ONES, L=0
LAC K2K /AC=2K
XOR K0 /0
RTL /AC=10K
RTL /AC=40K
RTL /AC=200K
RTL /AC=0
SNL /L=1, AC=0
E485, HALT /ERROR; BIT 7 NOT A 1, XOR K0S
          /FAILED

          SZA
E486, HALT /ERROR; AC PICKED A BIT, XOR K0S
          /FAILED

          /TEST XOR K0S, AC=1K
CLA: CMA: CLL /AC=ONES, L=0
LAC K1K /AC=1K
XOR K0 /0
RTL /AC=4K
RTL /AC=20K
RTL /AC=100K
RTL /AC=400K
RAL /AC=0
SNL /L=1, AC=0
E487, HALT /ERROR; BIT 8 NOT A 1, XOR K0S
          /FAILED

          SZA
E488, HALT /ERROR; AC PICKED A BIT, XOR K0S
          /FAILED

```

```

/TEST XOR K0S, AC=400
CLA:CMA:CLL /AC=ONES, L=0
LAC <400 /AC=400
XOR <0 /0
RTR /AC=100
RTR /AC=20
RTR /AC=4
RTR /AC=1
RAR /AC=0
SNL /L=1, AC=0
E489. HALT /ERROR; BIT 9 NOT A 1, XOR K0S
/FAILED
SZA
E490. HALT /ERROR; AC PICKED A BIT, XOR K0S
/FAILED

/TEST XOR K0S, AC=200
CLA:CMA:CLL /AC=ONES, L=0
LAC <200 /AC=200
XOR <0 /0
RTR /AC=40
RTR /AC=10
RTR /AC=2
RTR /AC=0
SNL /L=1, AC=0
E491. HALT /ERROR; BIT 10 NOT A 1, XOR K0S
/FAILED
SZA
E492. HALT /ERROR; AC PICKED A BIT, XOR K0S
/FAILED

/TEST XOR K0S, AC=100
CLA:CMA:CLL /AC=ONES, L=0
LAC <100 /AC=100
XOR <0 /0
RTR /AC=100
RTR /AC=20
RTR /AC=4
RAR /AC=1
SNL /L=1, AC=0
E493. HALT /ERROR; BIT 11 NOT A 1, XOR K0S
/FAILED
SZA
E494. HALT /ERROR; AC PICKED A BIT, XOR K0S
/FAILED

```

```

                                /TEST XOR K0S, AC=40
                                /AC=ONES, L=0
CLA: CMA: CLL                 /AC=40
LAC K40                       /0
XOR K0                         /AC=10
RTR                            /AC=2
RTR                            /AC=0
RTR                            /L=1
SNL                            /ERROR: BIT 12 NOT A 1, XOR K0S
E495, HALT                     /FAILED

                                /TEST XOR K0S, AC=20
                                /AC=ONES, L=0
SZA                             /AC=20
E496, HALT                     /AC=4
                                /AC=1
                                /AC=0
                                /L=1, AC=0
                                /ERROR: BIT 13 NOT A 1, XOR K0S
                                /FAILED
SZA                             /ERROR: AC PICKED A BIT, XOR K0S
E498, HALT                     /FAILED

                                /TEST XOR K0S, AC=10
                                /AC=ONES, L=0
CLA: CMA: CLL                 /AC=10
LAC K10                       /AC=10
XOR K0                         /0
RTR                            /AC=2
RTR                            /AC=0
SNL                            /L=1, AC=0
E499, HALT                     /ERROR: BIT 14 NOT A 1, XOR K0S
                                /FAILED
SZA                             /ERROR: AC PICKED A BIT, XOR K0S
E500, HALT                     /FAILED

```

	CLA:DMA:CLL	/TEST XOR K0S, AC=4
	LAC K4	/AC=ONES, L=0
	XOR K0	/AC=4
	RTR	/0
	RAR	/AC=1
	SNL	/AC=0
E501,	HALT	/L=1, AC=0
		/ERROR; BIT 15 NOT A 1, XOR K0S
		/FAILED
	SZA	
E502,	HALT	/ERROR; AC PICKED A BIT, XOR K0S
		/FAILED
	CLA:DMA:CLL	/TEST XOR K0S, AC=2
	LAC K2	/AC=ONES, L=0
	XOR K0	/AC=2
	RTR	/0
	RAR	/AC=0
	SNL	/L=1, AC=0
E503,	HALT	/ERROR; BIT 16 NOT A 1, XOR K0S
		/FAILED
	SZA	
E504,	HALT	/ERROR; AC PICKED A BIT, XOR K0S
		/FAILED
	CLA:DMA:CLL	/TEST XOR K0S, AC=1
	LAC K1	/AC=ONES, L=0
	XOR K0	/AC=1
	RAR	/0
	SNL	/AC=0
E505,	HALT	/L=1, AC=0
		/ERROR; BIT 17 NOT A 1, XOR K0S
		/FAILED
	SZA	
E506,	HALT	/ERROR; AC PICKED A BIT, XOR K0S
		/FAILED

```

                                /TEST XOR K400K, AC=0
                                /AC=0, L=0
CLA:CLL                        /AC=0      /400K
XOR K400K
RAL                            /AC=0
SNL                            /L=1, AC=0
E507, HALT                     /ERROR; BIT 0 NOT A 1, XOR K400K FAILED
SZA
E508, HALT                     /ERROR; AC PICKED A BIT, XOR K400K FAILED

                                /TEST XOR K200K, AC=0
                                /AC=0, L=0
CLA:CLL                        /AC=0      /200K
XOR K200K
RTL                            /AC=0
SNL                            /L=1, AC=0
E509, HALT                     /ERROR; BIT 1 NOT A 1, XOR K200K FAILED
SZA
E510, HALT                     /ERROR; AC PICKED A BIT, XOR K200K FAILED

                                /TEST XOR K100K, AC=0
                                /AC=0, L=0
CLA:CLL                        /AC=400K  /100K
XOR K100K
RTL                            /AC=0
RAL                            /AC=0
SNL                            /L=1, AC=0
E511, HALT                     /ERROR; BIT 2 NOT A 1, XOR K100K FAILED
SZA
E512, HALT                     /ERROR; AC PICKED A BIT, XOR K100K FAILED

                                /TEST XOR K40K, AC=0
                                /AC=0, L=0
CLA:CLL                        /AC=0      /40K
XOR K40K
RTL                            /200K
RTL                            /AC=0
SNL                            /L=1, AC=0
E513, HALT                     /ERROR; BIT 3 NOT A 1, XOR K40K FAILED
SZA
E514, HALT                     /ERROR; AC PICKED A BIT, XOR K40K FAILED

```

```

          /TEST XOR K20K, AC=0
CLA:CLL  /AC=0, L=0
XOR K20K /20K
RTL      /AC=100K
RTL      /AC=400K
RAL      /AC=0
SNL      /L=1, AC=0
E515,    HALT /ERROR; BIT 4 NOT A 1, XOR K20K FAILED
          SZA
E516,    HALT /ERROR; AC PICKED A BIT, XOR K20K FAILED

          /TEST XOR K10K, AC=0
CLA:CLL  /AC=0, L=0
XOR K10K /10K
RTL      /AC=40K
RTL      /AC=200K
RTL      /AC=0
SNL      /L=1, AC=0
E517,    HALT /ERROR; BIT 5 NOT A 1, XOR K10K FAILED
          SZA
E518,    HALT /ERROR; AC PICKED A BIT, XOR K10K FAILED

          /TEST XOR K4K, AC=0
CLA:CLL  /AC=0, L=0
XOR K4K  /4K
RTL      /AC=20K
RTL      /AC=100K
RTL      /AC=400K
RAL      /AC=0
SNL      /L=1, AC=0
E519,    HALT /ERROR; BIT 6 NOT A 1, XOR K4K FAILED
          SZA
E520,    HALT /ERROR; AC PICKED A BIT, XOR K4K FAILED

```



```

                                /TEST XOR K2K, AC=0
                                /AC=0, L=0
CLA:CLL                        /2K
XOR K2K                        /AC=10K
RTL                             /AC=40K
RTL                             /AC=200K
RTL                             /AC=0
SNL                             /L=1, AC=0
E521, HA_T                     /ERROR; BIT 7 NOT A 1, XOR K2K FAILED
SZA
E522, HALT                     /ERROR; AC PICKED A BIT, XOR K2K FAILED

                                /TEST XOR K1K, AC=0
                                /AC=0, L=0
CLA:CLL                        /1K
XOR K1K                        /AC=4K
RTL                             /AC=20K
RTL                             /AC=100K
RTL                             /AC=400K
RAL                             /AC=0
SNL                             /L=1, AC=0
E523, HALT                     /ERROR; BIT 8 NOT A 1, XOR K1K FAILED
SZA
E524, HALT                     /ERROR; AC PICKED A BIT, XOR K1K FAILED

                                /TEST XOR K400, AC=0
                                /AC=0, L=0
                                /400
CLA:CLL                        /AC=100
XOR K400                       /AC=20
RTR                             /AC=4
RTR                             /AC=1
RTR                             /AC=0
RAR                             /L=1, AC=0
E525, HALT                     /ERROR; BIT 9 NOT A 1, XOR K400 FAILED
SZA
E526, HALT                     /ERROR; AC PICKED A BIT, XOR K400 FAILED

```

```

          /TEST XOR K200, AC=0
          /AC=0, L=0
CLA:CLL
XOR K200      /200
RTR          /AC=40
RTR          /AC=10
RTR          /AC=2
RTR          /AC=0
SNL          /L=1, AC=0
E527, HALT   /ERROR; BIT 10 NOT A 1, XOR K200 FAILED
          SZA
E528, HALT   /ERROR; AC PICKED A BIT, XOR K200 FAILED

          /TEST XOR K100, AC=0
          /AC=0, L=0
CLA:CLL
XOR K100      /100
RTR          /AC=20
RTR          /AC=4
RTR          /AC=1
RAR          /AC=0
SNL          /L=1, AC=0
E529, HALT   /ERROR; BIT 11 NOT A 1, XOR K100 FAILED
          SZA
E530, HALT   /ERROR; AC PICKED A BIT, XOR K100 FAILED

          /TEST XOR K40, AC=0
          /AC=0, L=0
CLA:CLL
XOR K40       /40
RTR          /AC=10
RTR          /AC=2
RTR          /AC=0
SNL          /L=1, AC=0
E531, HALT   /ERROR; BIT 12 NOT A 1, XOR K40 FAILED
          SZA
E532, HALT   /ERROR; AC PICKED A BIT, XOR K40 FAILED

```

	CLA:CLL	/TEST XOR K20, AC=0
	XOR K20	/AC=0, L=0
	RTR	/20
	RTR	/AC=4
	RAR	/AC=1
	RAR	/AC=0
	SNL	/L=1, AC=0
E533,	HALT	/ERROR; BIT 13 NOT A 1, XOR K20 FAILED
	SZA	
E534,	HALT	/ERROR; AC PICKED A BIT, XOR K20 FAILED
	CLA:CLL	/TEST XOR K10, AC=0
	XOR K10	/AC=0, L=0
	RTR	/10
	RTR	/AC=2
	RAR	/AC=0
	SNL	/L=1, AC=0
E535,	HALT	/ERROR; BIT 14 NOT A 1, XOR K10 FAILED
	SZA	
E536,	HALT	/ERROR; AC PICKED A BIT, XOR K10 FAILED
	CLA:CLL	/TEST XOR K4, AC=0
	XOR K4	/AC=0, L=0
	RTR	/4
	RAR	/AC=1
	RAR	/AC=0
	SNL	/L=1, AC=0
E537,	HALT	/ERROR; BIT 15 NOT A 1, XOR K4 FAILED
	SZA	
E538,	HALT	/ERROR; AC PICKED A BIT, XOR K4 FAILED

```

          /TEST XOR K2, AC=0
          /AC=0, L=0
          /2
CLA:OLL  /AC=0
XOR K2   /L=1, AC=0
RTR      /ERROR; BIT 16 NOT A 1, XOR K2 FAILED
E539,    HALT
          SZA
E540,    HALT
          /ERROR; AC PICKED A BIT, XOR K2 FAILED

          /TEST XOR K1, AC=0
          /AC=0, L=0
          /1
CLA:OLL  /AC=0
XOR K1   /L=1, AC=0
RAR      /ERROR; BIT 17 NOT A 1, XOR K1 FAILED
E541,    HALT
          SZA
E542,    HALT
          /ERROR; AC PICKED A BIT, XOR K1 FAILED

START

```

/INST. TEST TAPE 6

	LAC K400K	/TEST XOR K400K, AC=K400K
	XOR K400K	/AC=400K
	SZA	/400K
E543,	HALT	/ERROR; BIT 0 NOT A 0, XOR K400K FAILED
	LAC K200K	/TEST XOR K200K, AC=K200K
	XOR K200K	/AC=200K
	SZA	/200K
E544,	HALT	/ERROR; BIT 1 NOT A 0, XOR K200K FAILED
	LAC K100K	/TEST XOR K100K, AC=K100K
	XOR K100K	/AC=100K
	SZA	/100K
E545,	HALT	/ERROR; BIT 2 NOT A 0, XOR K100K FAILED
	LAC K40K	/TEST XOR K400K, AC=K40K
	XOR K40K	/AC=40K
	SZA	/40K
E546,	HALT	/ERROR; BIT 3 NOT A 0, XOR K40K FAILED
	LAC K20K	/TEST XOR K20K, AC=K20K
	XOR K20K	/AC=20K
	SZA	/20K
E547,	HALT	/ERROR; BIT 4 NOT A 0, XOR K20K FAILED
	LAC K10K	/TEST XOR K10K, AC=K10K
	XOR K10K	/AC=10K
	SZA	/10K
E548,	HALT	/ERROR; BIT 5 NOT A 0, XOR K10K FAILED

```

LAC K4K
XOR K4K
SZA
E549, HALT
/TEST XOR K4K, AC=K4K
/AC=4K
/4K
/ERROR; BIT 6 NOT A 0, XOR K4K FAILED

LAC K2K
XOR K2K
SZA
E550, HALT
/TEST XOR K2K, AC=K2K
/AC=2K
/2K
/ERROR; BIT 7 NOT A 0, XOR K2K FAILED

LAC K1K
XOR K1K
SZA
E551, HALT
/TEST XOR K1K, AC=K1K
/AC=1K
/1K
/ERROR; BIT 8 NOT A 0, XOR K1K FAILED

LAC K400
XOR K400
SZA
E552, HALT
/TEST XOR K400, AC=K400
/AC=400
/400
/ERROR; BIT 9 NOT A 0, XOR K400 FAILED

LAC K200
XOR K200
SZA
E553, HALT
/TEST XOR K200, AC=K200
/AC=200
/200
/ERROR; BIT 10 NOT A 0, XOR K200 FAILED

LAC K100
XOR K100
SZA
E554, HALT
/TEST XOR K100, AC=K100
/AC=100
/100
/ERROR; BIT 11 NOT A 0, XOR K100 FAILED

```



```

                                /TEST XOR K7S, AC=M400K
                                /AC=377777
                                /777777
                                /AC=0
                                /AC=0, L=1
E561, HALT /ERROR; BIT 0 A 1 , XOR K7S FAILED
                                /ERROR; AC PICKED A BIT, XOR K7 S FAILED
                                /TEST XOR K7S, AC=M200K
                                /AC=577777
                                /777777
                                /AC=0
                                /AC=0, L=1
E563, HALT /ERROR; BIT 1 NOT A 1, XOR K7S FAILED
                                /ERROR; AC PICKED A BIT, XOR K7S FAILED
                                /TEST XOR K7S, AC=M100K
                                /AC=677777
                                /777777
                                /AC=200K
                                /AC=0
                                /AC=0, L=1
E565, HALT /ERROR; BIT 2 NOT A 1, XOR K7S FAILED
                                /ERROR; AC PICKED A BIT, XOR K7S FAILED
                                /TEST XOR K7S, AC=M40K
                                /AC=737777
                                /777777
                                /AC=200K
                                /AC=0
                                /AC=0, L=1
E567, HALT /ERROR; BIT 3 NOT A 1, XOR K7S FAILED
                                /ERROR; AC PICKED A BIT, XOR K7S FAILED
E568, HALT

```



```

LAC M20K      /TEST XOR K7S, AC=M20K
XOR K7S      /AC=757777
RAL          /777777
RTL          /AC=40K
RTL          /AC=200K
SNL          /AC=0
E569, HALT    /AC=0, L=1
          /ERROR; BIT 4 NOT A 1, XOR K7S FAILED
          SZA:CLL
E570, HALT    /ERROR; AC PICKED A BIT, XOR K7S FAILED

LAC M10K      /TEST XOR K7S, AC=M10K
XOR K7S      /AC=767777
RTL          /777777
RTL          /AC=40K
RTL          /AC=200K
SNL          /AC=0
E571, HALT    /AC=0, L=1
          /ERROR; BIT 5 NOT A 1, XOR K7S FAILED
          SZA:CLL
E572, HALT    /ERROR; AC PICKED A BIT, XOR K7S FAILED

LAC M4K       /TEST XOR K7S, AC=M4K
XOR K7S      /AC=773777
RAL          /777777
RTL          /AC=10K
RTL          /AC=40K
RTL          /AC=200K
SNL          /AC=0
E573, HALT    /AC=0, L=1
          /ERROR; BIT 6 NOT A 1, XOR K7S FAILED
          SZA:CLL
E574, HALT    /ERROR; AC PICKED A BIT, XOR K7S FAILED

```

```

LAC M2K          /TEST XOR K7S, AC=M2K
XOR K7S         /AC=775777
RTL             /777777
RTL             /AC=10K
RTL             /AC=40K
RTL             /AC=200K
RTL             /AC=0
SNL             /AC=0, L=1
E575, HALT      /ERROR; BIT 7 NOT A 1, XOR K7S FAILED
          SZA:CLL
E576, HALT      /ERROR; AC PICKED A BIT, XOR K7S FAILED

LAC M1K          /TEST XOR K7S, AC=M1K
XOR K7S         /AC=776777
RAL             /777777
RTL             /AC=2K
RTL             /AC=10K
RTL             /AC=40K
RTL             /AC=200K
RTL             /AC=0
SNL             /AC=0, L=1
E577, HALT      /ERROR; BIT 8 NOT A 1, XOR K7S FAILED
          SZA:CLL
E578, HALT      /ERROR; AC PICKED A BIT, XOR K7S FAILED

LAC M400        /TEST XOR K7S, AC=M400
XOR K7S         /AC=777377
RAR             /777777
RTR             /AC=200
RTR             /AC=40
RTR             /AC=10
RTR             /AC=2
RTR             /AC=0
SNL             /AC=0, L=1
E579, HALT      /ERROR; BIT 9 NOT A 1, XOR K7S FAILED
          SZA:CLL
E580, HALT      /ERROR; AC PICKED A BIT, XOR K7S FAILED

```

```

LAC M200          /TEST XOR K7S, AC=M200
XOR K7S          /AC=777577
RTR              /777777
RTR              /AC=40
RTR              /AC=10
RTR              /AC=2
RTR              /AC=0
SNL              /AC=0, L=1
E581, HALT       /ERROR; BIT 10 NOT A 1, XOR K7S FAILED
SZA:CLL
E582, HALT       /ERROR; AC PICKED A BIT, XOR K7S FAILED

LAC M100          /TEST XOR K7S, AC=M100
XOR K7S          /AC=777677
RAR              /777777
RTR              /AC=40
RTR              /AC=10
RTR              /AC=2
RTR              /AC=0
SNL              /AC=0, L=1
E583, HALT       /ERROR; BIT 11 NOT A 1, XOR K7S FAILED
SZA:CLL
E584, HALT       /ERROR; AC PICKED A BIT, XOR K7S FAILED

LAC M40           /TEST XOR K7S, AC=M40
XOR K7S          /AC=777737
RTR              /777777
RTR              /AC=10
RTR              /AC=2
RTR              /AC=0
SNL              /AC=0, L=1
E585, HALT       /ERROR; BIT 12 NOT A 1, XOR K7S FAILED
SZA:CLL
E586, HALT       /ERROR; AC PICKED A BIT, XOR K7S FAILED

```

```

LAC M20      /TEST XOR K7S, AC=M20
XOR K7S      /AC=777757
RAR          /777777
RTR          /AC=10
RTR          /AC=2
RTR          /AC=0
SNL          /AC=0, L=1
E587, HALT   /ERROR; BIT 13 NOT A 1, XOR K7S FAILED
SZA:OLL
E588, HALT   /ERROR; AC PICKED A BIT, XOR K7S FAILED

LAC M10      /TEST XOR K7S, AC=M10
XOR K7S      /AC=777767
RAR          /777777
RTR          /AC=2
RTR          /AC=0
SNL          /AC=0, L=1
E589, HALT   /ERROR; BIT 14 NOT A 1, XOR K7S FAILED
SZA:OLL
E590, HALT   /ERROR; AC PICKED A BIT, XOR K7S FAILED

LAC M4       /TEST XOR K7S, AC=M4
XOR K7S      /AC=777773
RAR          /777777
RTR          /AC=2
RTR          /AC=0
SNL          /AC=0, L=1
E591, HALT   /ERROR; BIT 15 NOT A 1, XOR K7S FAILED
SZA:OLL
E592, HALT   /ERROR; AC PICKED A BIT, XOR K7S FAILED

LAC M2       /TEST XOR K7S, AC=M2
XOR K7S      /AC=777775
RAR          /777777
RTR          /AC=0
SNL          /AC=0, L=1
E593, HALT   /ERROR; BIT 16 NOT A 1, XOR K7S FAILED
SZA:OLL
E594, HALT   /ERROR; AC PICKED A BIT, XOR K7S FAILED

```

```

                                /TEST XOR K7S, AC=M1
                                /AC=777776
LAC M1                          /777777
XOR K7S                          /AC=0
RAR                               /AC=0, L=1
SNL                              /ERROR; BIT 17 NOT A 1, XOR K7S FAILED
E595, HALT
SZA!CLL                          /ERROR; AC PICKED A BIT, XOR K7S FAILED
E596, HALT

                                /TEST XOR M400K, AC=ONES
                                /AC=ONES, L=0
                                /377777
CLA!CMA!CLL                      /AC=0
XOR M400K                          /AC=0, L=1
RAL                               /ERROR; BIT 0 NOT A 1, XOR M400K FAILED
SNL                              /ERROR; AC PICKED A BIT, XOR M400K FAILED
E597, HALT
SZA
E598, HALT

                                /TEST XOR M200K, AC=ONES
                                /AC=ONES, L=0
                                /577777
CLA!CMA!CLL                      /AC=0
XOR M200K                          /AC=0, L=1
RTL                               /ERROR; BIT 1 NOT A 1, XOR M200K FAILED
SNL                              /ERROR; AC PICKED A BIT, XOR M200K FAILED
E599, HALT
SZA
E600, HALT

                                /TEST XOR M100K, AC=ONES
                                /AC=ONES, L=0
                                /677777
CLA!CMA!CLL                      /AC=200K
XOR M100K                          /AC=0
RAL                               /AC=0, L=1
RTL                               /ERROR; BIT 2 NOT A 1, XOR M100K FAILED
SNL                              /ERROR; AC PICKED A BIT, XOR M100K FAILED
E601, HALT
SZA
E602, HALT

```

```

          /TEST XOR M40K, AC=ONES
          /AC=ONES, L=0
CLA:DMA:CLL XOR M40K /737777
          /AC=200K
          /AC=0
          /AC=0, L=1
E603, HALT /ERROR; BIT 3 NOT A 1, XOR M40K FAILED
          SZA /ERROR; AC PICKED A BIT, XOR M40K FAILED
E604, HALT

```

```

          /TEST XOR M20K, AC=ONES
          /AC=ONES, L=0
CLA:DMA:CLL XOR M20K /757777
          /AC=40K
          /AC=200K
          /AC=0
          /AC=0, L=1
E605, HALT /ERROR; BIT 4 NOT A 1, XOR M20K FAILED
          SZA /ERROR; AC PICKED A BIT, XOR M20K FAILED
E606, HALT

```

```

          /TEST XOR M10K, AC=ONES
          /AC=ONES, L=0
CLA:DMA:CLL XOR M10K /767777
          /AC=40K
          /AC=200K
          /AC=0
          /AC=0, L=1
E607, HALT /ERROR; BIT 5 NOT A 1 XOR M10K FAILED
          SZA /ERROR; AC PICKED A BIT, XOR M10K FAILED
E608, HALT

```

```

          /TEST XOR M4K, AC=ONES
          /AC=ONES, L=0
CLA:DMA:CLL XOR M4K /773777
          /AC=10K
          /AC=40K
          /AC=200K
          /AC=0
          /AC=0, L=1
E609, HALT /ERROR; BIT 6 NOT A 1, XOR M4K FAILED
          SZA /ERROR; AC PICKED A BIT, XOR M4K FAILED
E610, HALT

```

```

/TEST XOR M2K, AC=ONES
CLA:DMA:CLL /AC=ONES, L=0
XOR M2K /775777
RTL /AC=10K
RTL /AC=40K
RTL /AC=200K
RTL /AC=0
SNL /AC=0, L=1
E611, HALT /ERROR; BIT 7 NOT A 1, XOR M2K FAILED
SZA /ERROR; AC PICKED A BIT, XOR M2K FAILED
E612, HALT

/TEST XOR M1K, AC=ONES
CLA:DMA:CLL /AC=ONES, L=0
XOR M1K /776777
RAL /AC=2K
RTL /AC=10K
RTL /AC=40K
RTL /AC=200K
RTL /AC=0
SNL /AC=0, L=1
E613, HALT /ERROR; BIT 8 NOT A 1, XOR M1K FAILED
SZA /ERROR; AC PICKED A BIT, XOR M1K FAILED
E614, HALT

/TEST XOR M400, AC=ONES
CLA:DMA:CLL /AC=ONES, L=0
XOR M400 /777377
RAR /AC=200
RTR /AC=40
RTR /AC=10
RTR /AC=2
RTR /AC=0
SNL /AC=0, L=1
E615, HALT /ERROR; BIT 9 NOT A 1, XOR M400 FAILED
SZA /ERROR; AC PICKED A BIT, XOR M400 FAILED
E616, HALT

```

```

          /TEST XOR M200, AC=ONES
          /AC=ONES, L=0
          /777577
CLA:DMA:CLL
XOR M200
RTR      /AC=40
RTR      /AC=10
RTR      /AC=2
RTR      /AC=0
SNL      /AC=0, L=1
E617,    HALT    /ERROR; BIT 10 NOT A 1, XOR M200 FAILED
          SZA    /ERROR; AC PICKED A BIT, XOR M200 FAILED
E618,    HALT

```

```

          /TEST XOR M100, AC=ONES
          /AC=ONES, L=0
          /777677
CLA:DMA:CLL
XOR M100
RAR      /AC=40
RTR      /AC=10
RTR      /AC=2
RTR      /AC=0
SNL      /AC=0, L=1
E619,    HALT    /ERROR; BIT 11 NOT A 1, XOR M100 FAILED
          SZA    /ERROR; AC PICKED A BIT, XOR M100 FAILED
E620,    HALT

```

```

          /TEST XOR M40, AC=ONES
          /AC=ONES, L=0
          /777737
CLA:DMA:CLL
XOR M40
RTR      /AC=10
RTR      /AC=2
RTR      /AC=0
SNL      /AC=0, L=1
E621,    HALT    /ERROR; BIT 12 NOT A 1, XOR M40 FAILED
          SZA    /ERROR; AC PICKED A BIT, XOR M40 FAILED
E622,    HALT

```

```

          /TEST XOR M20, AC=ONES
          /AC=ONES, L=0
          /777757
CLA:DMA:CLL
XOR M20
RAR      /AC=10
RTR      /AC=2
RTR      /AC=0
SNL      /AC=0, L=1
E623,    HALT    /ERROR; BIT 14 NOT A 1, XOR M20 FAILED
          SZA    /ERROR; AC PICKED A BIT, XOR M20 FAILED
E624,    HALT

```



```

                                /TEST XOR M10, AC=ONES
                                /AC=ONES, L=0
                                /777767
                                /AC=2
                                /AC=0
                                /AC=0, L=1
E625,  HALT                      /ERROR; BIT 14 NOT A 1, XOR M10 FAILED
                                /ERROR; AC PICKED A BIT, XOR M10 FAILED
E626,  HALT

                                /TEST XOR M4, AC=ONES
                                /AC=ONES, L=0
                                /77773
                                /AC=2
                                /AC=0
                                /AC=0, L=1
E627,  HALT                      /ERROR; BIT 15 NOT A 1,, XOR M4 FAILED
                                /ERROR; AC PICKED A BIT, XOR M4 FAILED
E628,  HALT

                                /TEST XOR M2, AC=ONES
                                /AC=ONES, L=0
                                /777775
                                /AC=
                                /AC=0, L=1
E629,  HALT                      /ERROR; BIT 16 NOT A 1, XOR M2 FAILED
                                /ERROR; AC PICKED A BIT, XOR M2 FAILED
E630,  HALT

                                /TEST XOR M1, AC=ONES
                                /AC=ONES, L=0
                                /777776
                                /AC=0
                                /AC=0, L=1
E631,  HALT                      /ERROR; BIT 17 NOT A 1, XOR M1 FAILED
                                /ERROR; AC PICKED A BIT, XOR M1 FAILED
E632,  HALT

```

```

                                /TEST XOR K7S, AC=ONES, L=1
CLA!CMA!CLL!CML /AC=ONES, L=1
XOR K7S /777777
SZA
E633, HALT /ERROR; AC NOT 0, XOR K7S FAILED
SN-
E634, HALT /ERROR; LINK=0, XOR K7S FAILED

                                /TEST XOR K7S, AC=ONES, L=0
CLA!CMA!CLL /AC=ONES, L=0
XOR K7S /777777
SZL
E635, HALT /ERROR; LINK=1, XOR K7S FAILED

                                /TEST XOR K2525, AC=252525, L=1
                                /L=1
                                /AC=252525
                                /252525
CML!CML
LAC K2525
XOR K2525
SZA
E636, HALT /ERROR; AC NOT 0, XOR K2525 FAILED
SNL
E637, HALT /ERROR; LINK NOT A 1, XOR K2525 FAILED

                                /TEST XOR K5252, AC=525252, L=0
                                /L=0
                                /AC=525252
                                /525252
CLL
LAC K5252
XOR K5252
SZA
E638, HALT /ERROR; AC NOT 0, XOR K5252 FAILED
SZL
E639, HALT /ERROR; LINK NOT A 0, XOR K5252 FAILED

```

```

LAC K2525          /TEST XOR K5252, AC=252525
XOR K5252          /AC=252525
CMA                /525252
SZA                /AC=0
E640, HALT        /ERROR; AC NOT ONES, XOR K5252 FAILED

CLL:CML           /TEST LAC, AND, XOR SERIES, L=1
LAC K7S           /L=1
AND K7S           /AC=ONES
XOR K7S           /AC=ONES
SZA                /AC=0
E641, HALT        /ERROR; AC NOT 0, SERIES FAILED
SNL
E642, HALT        /ERROR; LINK NOT A 1, SERIES FAILED

CLL                /TEST LAC, XOR, AND SERIES, L=0
LAC K0            /L=0
XOR K7S           /AC=0
AND K7S           /AC=ONES
CMA                /AC=ONES
SZA                /AC=0
E643, HALT        /ERROR; AC NOT ONES, SERIES FAILED
SZL
E644, HALT        /ERROR; LINK NOT A 0, SERIES FAILED

CLL:CLA:CMA      /TEST XOR K7S SERIES, L=0
XOR K7S           /AC=ONES
XOR K7S           /AC=0
XOR K7S           /AC=ONES
XOR K7S           /AC=0
XOR K7S           /AC=ONES
XOR K7S           /AC=0
XOR K7S           /AC=ONES
CMA                /AC=0
SZA                /AC=0
E645, HALT        /ERROR; AC NOT 0, XOR SERIES FAILED
SZL
E646, HALT        /ERROR; LINK NOT 0, XOR SERIES FAILED

```

```

          /TEST TAD K0, AC=0, L=0
          /AC=0, L=0
          /AC=0
E647,   CLA:CLL
        TAD K0
        SZA
        HALT
          /ERROR; AC NOT 0, TAD K0 FAILED
E648,   SZL
        HALT
          /ERROR; LINK NOT 0, TAD K0 FAILED

          /TEST TAD K0, AC=0, L=1
          /AC=0, L=1
          /AC=0
E649,   CLA:CLL:CML
        TAD K0
        SNL
        HALT
          /ERROR; LINK NOT A 1, TAD K0 FAILED

          /TEST TAD K0, AC=400K
          /AC=0NES
          /AC=400K
          /0
          /0
E650,   CLA:CMA
        LAC K400K
        TAD K0
        XOR K400K
        SZA
        HALT
          /ERROR; BIT 0 NOT A 1, TAD K0 FAILED

          /TEST TAD K0, AC=200K
          /AC=0NES
          /AC=200K
          /0
          /0
E651,   CLA:CMA
        LAC K200K
        TAD K0
        XOR K200K
        SZA
        HALT
          /ERROR; BIT 1 NOT A 1, TAD K0 FAILED

          /TEST TAD K0, AC=100K
          /AC = 0NES
          /AC=100K
          /0
          /0
E652,   CLA:CMA
        LAC K100K
        TAD K0
        XOR K100K
        SZA
        HALT
          /ERROR; BIT 2 NOT A 1, TAD K0 FAILED

```

	CLA: CMA	/TEST TAD K0, AC=40K
	LAC <40K	/AC=ONES
	TAD K0	/AC=40K
	XOR <40K	/0
	SZA	/0
E653,	HALT	/ERROR; BIT 3 NOT A 1, TAD K0 FAILED
	CLA: CMA	/TEST TAD K0, AC=20K
	LAC <20K	/AC=ONES
	TAD K0	/AC=20K
	XOR <20K	/0
	SZA	/0
E654,	HALT	/ERROR; BIT 4 NOT A 1, TAD K0 FAILED
	CLA: CMA	/TEST TAD K0, AC=10K
	LAC <10K	/AC=ONES
	TAD K0	/AC=10K
	XOR <10K	/0
	SZA	/0
E655,	HALT	/ERROR; BIT 5 NOT A 1, TAD K0 FAILED
	CLA: CMA	/TEST TAD K0, AC=4K
	LAC <4K	/AC=ONES
	TAD K0	/AC=4K
	XOR <4K	/0
	SZA	/0
E656,	HALT	/ERROR; BIT 6 NOT A 1, TAD K0 FAILED
	CLA: CMA	/TEST TAD K0, AC=2K
	LAC <2K	/AC=ONES
	TAD K0	/AC=2K
	XOR <2K	/0
	SZA	/0
E657,	HALT	/ERROR; BIT 7 NOT A 1, TAD K0 FAILED

```

E658,  CLA: CMA      /TEST TAD K0, AC=1K
      LAC K1K      /AC=ONES
      TAD K0       /AC=1K
      XOR K1K      /0
      SZA          /0
      HALT        /ERROR; BIT 8 NOT A 1, TAD K0 FAILED

E659,  CLA: CMA      /TEST TAD K0, AC=400
      LAC K400     /AC=ONES
      TAD K0       /AC=400
      XOR K400     /0
      SZA          /0
      HALT        /ERROR; BIT 9 NOT A 1, TAD K0 FAILED

E660,  CLA: CMA      /TEST TAD K0, AC=200
      LAC K200     /AC=ONES
      TAD K0       /AC=200
      XOR K200     /0
      SZA          /0
      HALT        /ERROR; BIT 10 NOT A 1, TAD K0 FAILED

E661,  CLA: CMA      /TEST TAD K0, AC=100
      LAC K100     /AC=ONES
      TAD K0       /AC=100
      XOR K100     /0
      SZA          /0
      HALT        /ERROR; BIT 11 NOT A 1, TAD K0 FAILED

```

	CLA: CMA	/TEST TAD K0, AC=40
	LAC K40	/AC=ONES
	TAD K0	/AC=40
	XOR K40	/0
	SZA	/0
E662,	HALT	/ERROR; BIT 12 NOT A 1, TAD K0 FAILED
	CLA: CMA	/TEST TAD K0, AC=20
	LAC K20	/AC=ONES
	TAD K0	/AC=20
	XOR K20	/0
	SZA	/0
E663,	HALT	/ERROR; BIT 13 NOT A 1, TAD K0 FAILED
	CLA: CMA	/TEST TAD K0, AC=10
	LAC K10	/AC=ONES
	TAD K0	/AC=10
	XOR K10	/0
	SZA	/0
E664,	HALT	/ERROR; BIT 14 NOT A 1, TAD K0 FAILED
	CLA: CMA	/TEST TAD K0, AC=4
	LAC K4	/AC=ONES
	TAD K0	/AC=4
	XOR K4	/AC=0
	SZA	/0
E665,	HALT	/ERROR; BIT 15 NOT A 1, TAD K0 FAILED

```
CLA:OMA      /TEST TAD K0, AC=2
LAC K2       /AC=ONES
TAD K0       /AC=2
XOR K2       /0
SZA          /0
E666, HALT   /ERROR: BIT 16 NOT A 1, TAD K0 FAILED
```

```
CLA:OMA      /TEST TAD K0, AC=1
LAC K1       /AC=ONES
TAD K0       /AC=1
XOR K1       /0
SZA          /0
E667, HALT   /ERROR: BIT 17 NOT A 1, TAD K0 FAILED
START
```


/INSTRUCTION TEST TAPE 7

```

      CLA          /TEST TAD K400K, AC=0
      TAD K400K   /AC=0
      XOR K400K   /AC=400K
      SZA        /0
E668, HALT      /ERROR; BIT 0 NOT A 1, TAD K400K FAILED

      CLA          /TEST TAD K200K, AC=0
      TAD K200K   /AC=0
      XOR K200K   /AC=200K
      SZA        /0
E669, HALT      /ERROR; BIT 1 NOT A 1, TAD K200 K FAILED

      CLA          /TEST TAD K100K, AC=0
      TAD K100K   /AC=0
      XOR K100K   /AC=100K
      SZA        /0
E670, HALT      /ERROR; BIT 2 NOT A 1, TAD K100K FAILED

      CLA          /TEST TAD K40K, AC=0
      TAD K40K    /AC=0
      XOR K40K    /AC=40K
      SZA        /0
E671, HALT      /ERROR; BIT 3 NOT A 1, TAD K40K FAILED
```

```

          /TEST TAD K20K, AC=0
          /AC=0
          /AC=20K
          /0
E672,   /ERROR; BIT 4 NOT A 1, TAD K20K FAILED

          /TEST TAD K10K, AC=0
          /AC=0
          /AC=10K
          /0
E673,   /ERROR; BIT 5 NOT A 1, TAD K10K FAILED

          /TEST TAD K4K, AC=0
          /AC=0
          /AC=4K
          /0
E674,   /ERROR; BIT 6 NOT A 1, TAD K4K FAILED

          /TEST TAD K2K, AC=0
          /AC=0
          /AC=2K
          /0
E675,   /ERROR; BIT 7 NOT A 1, TAD K2K FAILED

CLA
TAD K20K
XOR K20K
SZA
HALT

CLA
TAD K10K
XOR K10K
SZA
HALT

CLA
TAD K4K
XOR K4K
SZA
HALT

CLA
TAD K2K
XOR K2K
SZA
HALT
```

```

          /TEST TAD K1K, AC=0
          /AC=0
          /AC=1K
          /0
E676,    HALT          /ERROR; BIT 8 NOT A 1, TAD K1K FAILED

          /TEST TAD K400, AC=0
          /AC=0
          /AC=400
          /0
E677,    HALT          /ERROR; BIT 9 NOT A 1, TAD K400 FAILED

          /TEST TAD K200, AC=0
          /AC=0
          /AC=200
          /0
E678,    HALT          /ERROR; BIT 10 NOT A 1, TAD K200 FAILED

          /TEST TAD K100, AC=0
          /AC=0
          /AC=100
          /0
E679,    HALT          /ERROR; BIT 11 NOT A 1, TAD K100 FAILED
```

```

          /TEST TAD K40, AC=0
          /AC=0
          /AC=40
          /0
E660,    CL4
          TAD K40
          XOR K40
          SZA
          HALT
          /ERROR; BIT 12 NOT A 1, TAD K40 FAILED

          /TEST TAD K20, AC=0
          /AC=0
          /AC=20
          /0
E681,    CL4
          TAD K20
          XOR K20
          SZA
          HALT
          /ERROR; BIT 13 NOT A 1, TAD K20 FAILED

          /TEST TAD K10, AC=0
          /AC=0
          /AC=10
          /0
E682,    CL4
          TAD K10
          XOR K10
          SZA
          HALT
          /ERROR; BIT 14 NOT A 1, TAD K10 FAILED

          /TEST TAD K4, AC=0
          /AC=0
          /AC=4
          /0
E683,    CL4
          TAD K4
          XOR K4
          SZA
          HALT
          /ERROR; BIT 15 NOT A 1, TAD K4 FAILED
```

	CLA	/TEST TAD K2, AC=0
	TAD K2	/AC=0
	XOR K2	/AC=2
	SZA	/0
E684,	HALT	/ERROR; BIT 16 NOT A 1, TAD K2 FAILED
	CLA	/TEST TAD K1, AC=0
	TAD K1	/AC=0
	XOR K1	/AC=1
	SZA	/0
E685,	HALT	/ERROR; BIT 17 NOT A 1, TAD K1 FAILED
	CLA	/TEST TAD M400K, AC=0
	TAD M400K	/AC=0
	XOR M400K	/AC=377777
	SZA	/0
E686,	HALT	/ERROR; TAD M400K FAI-ED
	CLA	/TEST TAD M200K, AC=0
	TAD M200K	/AC=0
	XOR M200K	/AC=577777
	SZA	/0
E687,	HALT	/ERROR; TAD M200K FAI-ED

```
          /TEST TAD M100K, AC=0
          /AC=0
CLA      /AC=677777
TAD M100K
XOR M100K
SZ A
E688,   HALT      /ERROR; TAD M100K FAILED
```

```
          /TEST TAD M40K, AC=0
          /AC=0
CLA      /AC=737777
TAD M40K
XOR M40K
SZ A
E689,   HALT      /ERROR; TAD M40K FAILED
```

```
          /TEST TAD M20K, AC=0
          /AC=0
CLA      /AC=757777
TAD M20K
XOR M20K
SZ A
E690,   HALT      /ERROR; TAD M20K FAILED
```

```
          /TEST TAD M10K, AC=0
          /AC=0
CLA      /AC=767777
TAD M10K
XOR M10K
SZ A
E691,   HALT      /ERROR; TAD M10K FAILED
```

```
E692,  CLA          /TEST TAD M4K, AC=0
        TAD M4K    /AC=0
        XOR M4K    /AC=773777
        SZA        /0
        HALT      /ERROR; TAD M4K FAILED

E693,  CLA          /TEST TAD M2K, AC=0
        TAD M2K    /AC=0
        XOR M2K    /AC=775777
        SZA        /0
        HALT      /ERROR; TAD M2K FAILED

E694,  CLA          /TEST TAD M1K, AC=0
        TAD M1K    /AC=0
        XOR M1K    /AC=776777
        SZA        /0
        HALT      /ERROR; TAD M1K FAILED

E695,  CLA          /TEST TAD M400, AC=0
        TAD M400   /AC=0
        XOR M400   /AC=777377
        SZA        /0
        HALT      /ERROR; TAD M400 FAILED
```

```
          /TEST TAD M200, AC=0
          /AC=0
          /AC=777577
          /0
E696,  HALT      /ERROR; TAD M200 FAILED

          /TEST TAD M100, AC=0
          /AC=0
          /AC=777677
          /0
E697,  HALT      /ERROR; TAD M100 FAILED

          /TEST TAD M40, AC=0
          /AC=0
          /AC=777737
          /0
E698,  HALT      /ERROR; TAD M40 FAILED

          /TEST M20, AC=0
          /AC=0
          /AC=777757
          /0
E699,  HALT      /ERROR; TAD M20 FAILED
```



```

          /TEST TAD M10, AC=0
          /AC=0
          /AC=777767
          /0
E700,   CLA
        TAD M10
        XOR M10
        SZA
        HALT      /ERROR: TAD M10 FAILED

          /TEST TAD M4, AC=0
          /AC=0
          /AC=777773
          /0
E701,   CLA
        TAD M4
        XOR M4
        SZA
        HALT      /ERROR: TAD M4 FAILED

          /TEST TAD M2, AC=0
          /AC=0
          /AC=777775
          /0
E702,   CLA
        TAD M2
        XOR M2
        SZA
        HALT      /ERROR: TAD M2 FAILED

          /TEST TAD M1, AC=0
          /AC=0
          /AC=777776
          /0
E703,   CLA
        TAD M1
        XOR M1
        SZA
        HALT      /ERROR: TAD M1 FAILED
```

```

                                /TEST TAD M400K, TAD K400K, L=0
                                /AC=0, L=0
                                /AC=377777
                                /400000
CLA: CLL
TAD M400K
TAD K400K
CMA
SZA
                                /AC=0
E704, HALT /ERROR; INCLUSIVE TAD FAILURE
SZA
E705, HALT /ERROR; LINK NOT A 0

                                /TEST TAD M200K, TAD K200K, L=0
                                /AC=0, L=0
                                /AC=577777
                                /200000
CLA: CLL
TAD M200K
TAD K200K
CMA
SZA
                                /AC=0
E706, HALT /ERROR; INCLUSIVE TAD FAILURE
SZA
E707, HALT /ERROR; LINK NOT A 0

                                /TEST TAD M100K, TAD K100K, L=0
                                /AC=0, L=0
                                /AC=677777
                                /100000
CLA: CLL
TAD M100K
TAD K100K
CMA
SZA
                                /AC=0
E708, HALT /ERROR; INCLUSIVE TAD FAILURE
SZA
E709, HALT /ERROR; LINK NOT A 0

```

	CLA:CLL	/TEST TAD M40K, TAD K40K, L=0
	TAD M40K	/AC=0, L=0
	TAD K40K	/AC=737777
	CMA	/040000
	SZA	/AC=0
E710,	HALT	/ERROR; INCLUSIVE TAD FAILURE
	SZL	
E711,	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST TAD M20K, TAD K20K, L=0
	TAD M20K	/AC=0, L=0
	TAD K20K	/AC=757777
	CMA	/020000
	SZA	/AC=0
E712,	HALT	/ERROR; INCLUSIVE TAD FAILURE
	SZL	
E713,	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST TAD M10K, TAD K10K, L=0
	TAD M10K	/AC=0, L=0
	TAD K10K	/AC=767777
	CMA	/010000
	SZA	/AC=0
E714,	HALT	/ERROR; INCLUSIVE TAD FAILURE
	SZL	
E715,	HALT	/ERROR; LINK NOT A 0

```

          /TEST TAD M4K, TAD <4K, L=0
          /AC=0, L=0
          /AC=773777
          /004000
          /AC=0
E716,   HALT           /ERROR; INCLUSIVE TAD FAILURE
          SZL
E717,   HALT           /ERROR; LINK NOT A 0

          /TEST TAD M2K, TAD <2K, L=0
          /AC=0, L=0
          /AC=775777
          /002000
          /AC=0
E718,   HALT           /ERROR; INCLUSIVE TAD FAILURE
          SZL
E719,   HALT           /ERROR; LINK NOT A 0

          /TEST TAD M1K, TAD <1K, L=0
          /AC=0, L=0
          /AC=776777
          /001000
          /AC=0
E720,   HALT           /ERROR; INCLUSIVE TAD FAILURE
          SZL
E721,   HALT           /ERROR; LINK NOT A 0

          /TEST TAD M400, TAD K400, L=0
          /AC=0, L=0
          /AC=777377
          /000400
          /AC=0
E722,   HALT           /ERROR; INCLUSIVE TAD FAILURE
          SZL
E723,   HALT           /ERROR; LINK NOT A 0

```

```

/TEST TAD M200, TAD K200, L=0
/AC=0, L=0
/AC=777577
/000200
/AC=0
E724, HALT /ERROR; INCLUSIVE TAD FAILURE
SZL
E725, HALT /ERROR; LINK NOT A 0

/TEST TAD M100, TAD K100, L=0
/AC=0, L=0
/AC=777677
/000100
/AC=0
E726, HALT /ERROR; INCLUSIVE TAD FAILURE
SZL
E727, HALT /ERROR; LINK NOT A 0

/TEST TAD M40, TAD K40, L=0
/AC=0, L=0
/AC=77737
/000040
/AC=0
E728, HALT /ERROR; INCLUSIVE TAD FAILURE
SZL
E729, HALT /ERROR; LINK NOT A 0

```

	CLA:CLL	/TEST TAD M20, TAD K20, L=0
	TAD M20	/AC=0, L=0
	TAD K20	/AC=777757
	CMA	/000020
	SZA	/AC=0
E730,	HALT	/ERROR; INCLUSIVE TAD FAILURE
	SZL	
E731,	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST TAD M10, TAD K10, L=0
	TAD M10	/AC=0, L=0
	TAD K10	/AC=777767
	CMA	/000010
	SZA	/AC=0
E732,	HALT	/ERROR; INCLUSIVE TAD FAILURE
	SZL	
E733,	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST TAD M4, TAD K4, L=0
	TAD M4	/AC=0, L=0
	TAD K4	/AC=777773
	CMA	/000004
	SZA	/AC=0
E734,	HALT	/ERROR; INCLUSIVE TAD FAILURE
	SZL	
E735,	HALT	/ERROR; LINK NOT A 0

	CLA:CLL	/TEST TAD M2, TAD K2, L=0
	TAD M2	/AC=0, L=0
	TAD K2	/AC=777775
	CMA	/000002
	SZA	/AC=0
E736,	HALT	/ERROR: INCLUSIVE TAD FAILURE
	SZL	
E737,	HALT	/ERROR: LINK NOT A 0
	CLA:CLL	/TEST TAD M1, TAD K1, L=0
	TAD M1	/AC=0, L=0
	TAD K1	/AC=777776
	CMA	/000001
	SZA	/AC=0
E738,	HALT	/ERROR: INCLUSIVE TAD FAILURE
	SZL	
E739,	HALT	/ERROR: LINK NOT A 0
	CLA:CLL:CML	/TEST TAD K400K, TAD M400K, L=1
	TAD K400K	/AC=0, L=1
	TAD M400K	/AC=400000
	CMA	/377777
	SZA	/AC=0
E740,	HALT	/ERROR: INCLUSIVE TAD FAILURE
	SNL	
E741,	HALT	/ERROR: LINK NOT A 1

```

          /TEST TAD K200K, L=1
          /AC=0, L=1
CLA:CLL:CML  TAD K200K          /AC=200000
TAD K200K          /577777
CMA          /AC=0
SZA
E742,  HALT          /ERROR: INCLUSIVE TAD FAILURE
SNL
E743,  HALT          /ERROR: LINK NOT A 1

          /TEST TAD K100K, TAD M100K, L=1
          /AC=0, L=1
CLA:CLL:CML  TAD K100K          /AC=100000
TAD K100K          /677777
TAD M100K
CMA          /AC=0
SZA
E744,  HALT          /ERROR: INCLUSIVE TAD FAILURE
SNL
E745,  HALT          /ERROR: LINK NOT A 1

          /TEST TAD K40K, TAD M40K, L=1
          /AC=0, L=1
CLA:CLL:CML  TAD K40K          /AC=040000
TAD K40K          /737777
TAD M40K
CMA          /AC=0
SZA
E746,  HALT          /ERROR: INCLUSIVE TAD FAILURE
SNL
E747,  HALT          /ERROR: LINK NOT A 1

```


	CLA:CLL:CML	/TEST TAD K20K, TAD M20K, L=1
	TAD K20K	/AC=0, L=1
	TAD M20K	/AC=020000
	CMA	/750000
	SZA	/AC=0
E748,	HALT	/ERROR; INCLUSIVE TAD FAILURE
E749,	HALT	/ERROR; LINK NOT A 1
	CLA:CLL:CML	/TEST TAD K10K, TAD M10K, L=1
	TAD K10K	/AC=0, L=1
	TAD M10K	/AC=010000
	CMA	/767777
	SZA	/AC=0
E750,	HALT	/ERROR; INCLUSIVE TAD FAILURE
E751,	HALT	/ERROR; LINK NOT A 1
	CLA:CLL:CML	/TEST TAD K4K, TAD M4K, L=1
	TAD K4K	/AC=0, L=1
	TAD M4K	/AC=004000
	CMA	/773777
	SZA	/AC=0
E752,	HALT	/ERROR; INCLUSIVE TAD FAILURE
E753,	HALT	/ERROR; LINK NOT A 1

```

                                /TEST TAD K2K, TAD M2K, L=1
CLA:CLL:CML                    /AC=0, L=1
TAD K2K                          /AC=002000
TAD M2K                          /775777
CMA                              /AC=0
SZA
E754, HALT                       /ERROR; INCLUSIVE TAD FAILURE
SNL
E755, HALT                       /ERROR; LINK NOT A 1

                                /TEST TAD K1K, TAD M1K, L=1
CLA:CLL:CML                    /AC=0, L=1
TAD K1K                          /AC=001000
TAD M1K                          /776777
CMA                              /AC=0
SZA
E756, HALT                       /ERROR; INCLUSIVE TAD FAILURE
SNL
E757, HALT                       /ERROR; LINK NOT A 1

                                /TEST TAD K400, TAD M400, L=1
CLA:CLL:CML                    /AC=0, L=1
TAD K400                          /AC=000400
TAD M400                          /777377
CMA                              /AC=0
SZA
E758, HALT                       /ERROR; INCLUSIVE TAD FAILURE
SNL
E759, HALT                       /ERROR; LINK NOT A 1

```

	CLA:CLL:CML	/TEST TAD K200, TAD M200, L=1
	TAD K200	/AC=0, L=1
	TAD M200	/AC=000220
	CMA	/777577
	SZA	/AC=0
E760,	HALT	/ERROR; INCLUSIVE TAD FAILURE
	SNL	
E761,	HALT	/ERROR; LINK NOT A 1
	CLA:CLL:CML	/TEST TAD K100, TAD M100, L=1
	TAD K100	/AC=0, L=1
	TAD M100	/AC=000100
	CMA	/777677
	SZA	/AC=0
E762,	HALT	/ERROR; INCLUSIVE TAD FAILURE
	SNL	
E763,	HALT	/ERROR; LINK NOT A 1
	CLA:CLL:CML	/TEST TAD K40, TAD M40, L=1
	TAD K40	/AC=0, L=1
	TAD M40	/AC=000040
	CMA	/777737
	SZA	/AC=0
E764,	HALT	/ERROR; INCLUSIVE TAD FAILURE
	SNL	
E765,	HALT	/ERROR; LINK NOT A 1

```

          /TEST TAD K20, TAD M20, L=1
CLA:CLL:CML /AC=0, L=1
TAD K20     /AC=000020
TAD M20     /777757
CMA         /AC=0
SZA
E766, HALT /ERROR: INCLUSIVE TAD FAILURE
SNL
E767, HALT /ERROR: LINK NOT A 1

          /TEST TAD K10, TAD M10, L=1
CLA:CLL:CML /AC=0, L=1
TAD K10     /AC=000010
TAD M10     /777767
CMA         /AC=0
SZA
E768, HALT /ERROR: INCLUSIVE TAD FAILURE
SNL
E769, HALT /ERROR: LINK NOT A 1

          /TEST TAD K4, TAD M4, L=1
CLA:CLL:CML /AC=0, L=1
TAD K4      /AC=000004
TAD M4      /777773
CMA         /AC=0
SZA
E770, HALT /ERROR: INCLUSIVE TAD FAILURE
SNL
E771, HALT /ERROR: LINK NOT A 1
START

```

```

/INST. TEST TAPE 8
      CLA:CLL:CML      /TEST TAD K2, TAD M2, L=1
      TAD K2          /AC=0, L=1
      TAD M2          /AC=000002
      CMA             /777775
      SZA             /AC=0
E772,  HALT          /ERROR: INCLUSIVE TAD FAILURE
      SNL
E773,  HALT          /ERROR: LINK NOT A 1

      CLA:CLL:CML      /TEST TAD K1, TAD M1, L=1
      TAD K1          /AC=0, L=1
      TAD M1          /AC=000001
      CMA             /777776
      SZA             /AC=0
E774,  HALT          /ERROR: INVLUISIVE TAD FAILURE
      SNL
E775,  HALT          /ERROR: LINK NOT A 1

      CLA             /TEST TAD K1S, TAD K6S
      TAD K1S        /AC=0
      TAD K6S        /AC=111111
      CMA             /666666
      SZA             /AC=0
E776,  HALT          /ERROR: INVLUISIVE TAD FAILURE

      CLA             /TEST TAD K2S, TAD K5S
      TAD K2S        /AC=0
      TAD K5S        /AC=222222
      CMA             /555555
      SZA             /AC=0
E777,  HALT          /ERROR: INCLUSIVE TAD FAILURE

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          /TEST TAD <3S, TAD <4S
          /AC=0
          /AC=333333
          /444444
          /AC=0
E778,  HALT      /ERROR; INCLUSIVE TAD FAILURE

          /TEST TAD <4S, TAD <3S
          /AC=0
          /AC=444444
          /AC=333333
          /AC=0
E779,  HALT      /ERROR; INCLUSIVE TAD FAILURE

          /TEST TAD <5S, TAD <2S
          /AC=0
          /AC=555555
          /AC=222222
          /AC=0
E780,  HALT      /ERROR; INCLUSIVE TAD FAILURE

          /TEST TAD <6S, TAD <1S
          /AC=0
          /AC=666666
          /111111
          /AC=0
E781,  HALT      /ERROR; INCLUSIVE TAD FAILURE
```

	CLA	/TEST TAD K7S, TAD K0
	TAD K7S	/AC=0
	TAD K0	/AC=777777
	CMA	/AC=000000
	SZA	/AC=0
E782,	HALT	/ERROR; INCLUSIVE TAD FAILURE
		/TEST TAD K0, TAD K7S
	CLA	/AC=0
	TAD K0	/AC=000000
	TAD K7S	/777777
	CMA	/AC=0
	SZA	
E783,	HALT	/ERROR; INCLUSIVE TAD FAILURE
		/TEST TAD K2525, TAD K5252
	CLA	/AC=0
	TAD K2525	/AC=252525
	TAD K5252	/525252
	CMA	/AC=0
	SZA	
E784,	HALT	/ERROR; INCLUSIVE TAD FAILURE
		/TEST TAD K5252, TAD K2525
	CLA	/AC=0
	TAD K5252	/AC=525252
	TAD K2525	/252525
	CMA	/AC=0
	SZA	
E785,	HALT	/ERROR; INCLUSIVE TAD FAILURE

```

/TEST TAD K400K, AC=400K, L=0
/L=0
/AC=400K
/400K
CLL
LAC K400K
TAD K400K
SZA
E786, HALT /ERROR; BIT 0 NOT A 0, SUM FAILED
SNL
E787, HALT /ERROR; LINK NOT A 1, CARRY FAILED

/TEST TAD K400K, AC=400K, L=1
/L=1
/AC=400K
/400K
CLL:OML
LAC K400K
TAD K400K
SZL
E788, HALT /ERROR; BIT 0 CARRY FAILED TO COMPLEMENT LINK

/TEST TAD K200K, AC=K200K
/AC=200K
/AC=400K
/0
LAC K200K
TAD K200K
XOR K400K
SZA
E789, HALT /ERROR; BIT 1 SUM OR CARRY FAILED

/TEST TAD K100K, AC=K100K
/AC=100K
/AC=200K
/0
LAC K100K
TAD K100K
XOR K200K
SZA
E790, HALT /ERROR; BIT 2 SUM OR CARRY FAILED

```



```

LAC <40K      /TEST TAD <40K, AC=<40K
TAD <40K      /AC=40K
XOR <100K    /AC=100K
SZA          /0
E791, HALT   /ERROR; BIT 3 SUM OR CARRY FAILED

LAC <20K      /TEST TAD <20K, AC=<20K
TAD <20K      /AC=20K
XOR <40K      /AC=40K
SZA          /0
E792, HALT   /ERROR; BIT 4 SUM OR CARRY FAILED

LAC <10K      /TEST TAD <10K, AC=< 10K
TAD <10K      /AC=10K
XOR <20K      /AC=20K
SZA          /0
E793, HALT   /ERROR; BIT 5 SUM OR CARRY FAILED

LAC <4K       /TEST TAD <4K, AC=<4K
TAD <4K       /AC=4K
XOR <10K     /AC=10K
SZA          /0
E794, HALT   /ERROR; BIT 6 SUM OR CARRY FAILED
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LAC <2K      /TEST TAD K2K, AC=K2K
TAD <2K      /AC=2K
XOR <4K      /AC=4K
SZA          /Ø
E795, HALT   /ERROR; BIT 7 SUM OR CARRY FAILED

LAC <1K      /TEST TAD K1K, AC=K1K
TAD <1K      /AC=1K
XOR <2K      /AC=2K
SZA          /Ø
E796, HALT   /ERROR; BIT 8 SUM OR CARRY FAILED

LAC <400     /TEST TAD K400, AC=K400
TAD <400     /AC=400
XOR <1K      /AC=1K
SZA          /Ø
E797, HALT   /ERROR; BIT 9 SUM OR CARRY FAILED

LAC <200     /TEST TAD K200, AC=K200
TAD <200     /AC=200
XOR <400     /AC=400
SZA          /Ø
E798, HALT   /ERROR; BIT 10 SUM OR CARRY FAILED
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LAC <100      /TEST TAD K100, AC=<100
TAD <100      /AC=100
XOR <200      /AC=200
SZA           /0
E799, HALT    /ERROR; BIT 11 SUM OR CARRY FAILED

LAC <40       /TEST TAD K40, AC=K40
TAD <40       /AC=40
XOR <100      /AC=100
SZA           /0
E800, HALT    /ERROR; BIT 12 SUM OR CARRY FAILED

LAC <20       /TEST TAD K20, AC=K20
TAD <20       /AC=20
XOR <40       /AC=40
SZA           /0
E801, HALT    /ERROR; BIT 13 SUM OR CARRY FAILED

LAC <10       /TEST TAD K10, AC=K10
TAD <10       /AC=10
XOR <20       /AC=20
SZA           /0
E802, HALT    /ERROR; BIT 14 SUM OR CARRY FAILED

LAC K4        /TEST TAD K4, AC=K4
TAD K4        /AC=4
XOR K10       /AC=10
SZA           /0
E803, HALT    /ERROR; BIT 15 SUM OR CARRY FAILED

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LAC K2          /TEST TAD K2, AC=K2
TAD K2          /AC=2
XOR K4          /AC=4
SZA            /0
E804,  HALT      /ERROR; BIT 16 SUM OR CARRY FAILED

LAC K1          /TEST TAD K1, AC=K1
TAD K1          /AC=1
XOR K2          /AC=2
SZA            /0
E805,  HALT      /ERROR; BIT 17 SUM OR CARRY FAILED

CLA!CMA!CLL!CML /TEST TAD M400K, AC=ONES, L=1
TAD M400K       /AC=ONES, L=1
XOR M400KM      /377777
SZA            /AC=0
E806,  HALT      /ERROR; TAD M400K FAILED
SZA

E807,  HALT      /ERROR; LINK NOT A 0, CARRY FAILED

CLA!CMA!CLL!CML /TEST TAD M200K, AC=ONES L=1
TAD M200K       /AC=ONES, L=1
XOR M200KM      /577777
SZA            /AC=0
E808,  HALT      /ERROR; TAD M200K FAILED
SZA

E809,  HALT      /ERROR; LINK NOT A 0, CARRY FAILED

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          /TEST TAD M100K, AC=ONES, L=1
CLA:CMA:CLL:CML /AC=ONES, L=1
TAD M100K          /677777
XOR M100KM        /677776
SZA               /AC=0
E810,  HALT       /ERROR; TAD M100K FAILED
          SZL
E811,  HALT       /ERROR; LINK NOT A 0, CARRY FAILED

          /TEST TAD M40K, AC=ONES, L=1
CLA:CMA:CLL:CML /AC=ONES, L=1
TAD M40K          /737777
XOR M40KM        /737776
SZA               /AC=0
E812,  HALT       /ERROR; TAD M40K FAILED
          SZL
E813,  HALT       /ERROR; LINK NOT A 0, CARRY FAILED

          /TEST TAD M20K, AC=ONES, L=1
CLA:CMA:CLL:CML /AC=ONES, L=1
TAD M20K          /757777
XOR M20KM        /757776
SZA               /AC=0
E814,  HALT       /ERROR; TAD M20K FAILED
          SZL
E815,  HALT       /ERROR; LINK NOT A 0, CARRY FAILED

          /TEST TAD M10K, AC=ONES, L=1
CLA:CMA:CLL:CML /AC=ONES, L=1
TAD M10K          /767777
XOR M10KM        /767776
SZA               /AC=0
E816,  HALT       /ERROR; TAD M10K FAILED
          SZL
E817,  HALT       /ERROR; LINK NOT A 0 CARRY FAILED

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          /TEST TAD M4K, AC=ONES, L=1
CLA:OMA:CLL:CML /AC=ONES, L=1
TAD M4K          /773777
XOR M4KM        /773776
SZA             /AC=0
E818,  HALT      /ERROR; TAD M4K FAILED
SZL
E819,  HALT      /ERROR; LINK NOT A 0, CARRY FAILED

          /TEST TAD M2K, AC=ONES, L=1
CLA:OMA:CLL:CML /AC=ONES, L=1
TAD M2K          /775777
XOR M2KM        /775776
SZA             /AC=0
E820,  HALT      /ERROR; TAD M2K FAILED
SZL
E821,  HALT      /ERROR; LINK NOT A 0, CARRY FAILED

          /TEST TAD M1K, AC=ONES, L=1
CLA:OMA:CLL:CML /AC=ONES, L=1
TAD M1K          /776777
XOR M1KM        /776776
SZA             /AC=0
E822,  HALT      /ERROR; TAD M1K FAILED
SZL
E823,  HALT      /ERROR; LINK NOT A 0, CARRY FAILED

          /TEST TAD M400, AC=ONES, L=1
CLA:OMA:CLL:CML /AC=ONES, L=1
TAD M400        /777377
XOR M400M      /777376
SZA             /AC=0
E824,  HALT      /ERROR; TAD M400 FAILED
SZL
E825,  HALT      /ERROR; LINK NOT A 0, CARRY FAILED

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/TEST TAD M200, AC=ONES, L=1
CLA:DMA:CLL:CML /AC=ONES, L=1
TAD M200 /777577
XOR M200M /777576
SZA /AC=0
E826, HALT /ERROR; TAD M200 FAILED
SZL
E827, HALT /ERROR; LINK NOT A 0, CARRY FAILED

/TEST TAD M100, AC=ONES, L=1
CLA:DMA:CLL:CML /AC=ONES, L=1
TAD M100 /777677
XOR M100M /777676
SZA /AC=0
E828, HALT /ERROR; TAD M100 FAILED
SZL
E829, HALT /ERROR; LINK NOT A 0, CARRY FAILED

/TEST TAD M40, AC=ONES, L=1
CLA:DMA:CLL:CML /AC=ONES, L=1
TAD M40 /777737
XOR M40M /777736
SZA /AC=0
E830, HALT /ERROR; TAD M40 FAILED
SZL
E831, HALT /ERROR; LINK NOT A 0, CARRY FAILED

/TEST TAD M20, AC=ONES, L=1
CLA:DMA:CLL:CML /AC=ONES, L=1
TAD M20 /777757
XOR M20M /777756
SZA /AC=0
E832, HALT /ERROR; TAD M20 FAILED
SZL
E833, HALT /ERROR; LINK NOT A 0, CARRY FAILED

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/TEST TAD M10, AC=ONES, L=1
CLA!CMA!CLL!CML /AC=ONES L=1
TAD M10 /777767
XOR M10M /777766
SZA /AC=0
E834, HALT /ERROR; TAD M10 FAILED
SZL
E835, HALT /ERROR; LINK NOT A 0, CARRY FAILED

/TEST TAD M4, AC=ONES, L=1
CLA!CMA!CLL!CML /AC=ONES, L=1
TAD M4 /777773
XOR M4M /777772
SZA /AC=0
E836, HALT /ERROR; TAD M4 FAILED
SZL
E837, HALT /ERROR; LINK NOT A 0, CARRY FAILED

/TEST TAD 2, AC=ONES, L=1
CLA!CMA!CLL!CML /AC=ONES, L=1
TAD M2 /777775
XOR M2M /777774
SZA /AC=0
E838, HALT /ERROR; TAD M2 FAILED
SZL
E839, HALT /ERROR; LINK NOT A 0, CARRY FAILED

/TEST TAD M1, AC=ONES, L=1
CLA!CMA!CLL!CML /AC=ONES, L=1
TAD M1 /777776
XOR M1M /777775
SZA /AC=0
E840, HALT /ERROR; TAD M1 FAILED
SZL
E841, HALT /ERROR; LINK NOT A 0, CARRY FAILED

```



```

                                /TEST TAD K7S, AC=M400K, L=0
                                /L=0
                                /AC=377777
                                /ONES
                                /377776
                                /AC=0
E842, HALT /ERROR; TAD K7S FAILED
      SNL
E843, HALT /ERROR; LINK NOT A 1, CARRY FAILED

                                /TEST TAD K7S, AC=M200K, L=0
                                /L=0
                                /AC=577777
                                /ONES
                                /577776
                                /AC=0
E844, HALT /ERROR; TAD K7S FAILED
      SNL
E845, HALT /ERROR; LINK NOT A 1, CARRY FAILED

                                /TEST TAD K7S, AC=M100K, L=0
                                /L=0
                                /AC=677777
                                /ONES
                                /677776
                                /AC=0
E846, HALT /ERROR; TAD K7S FAILED
      SNL
E847, HALT /ERROR; LINK NOT A 1, CARRY FAILED

                                /TEST TAD K7S, AC=M40KM, L=0
                                /L=0
                                /AC=737777
                                /ONES
                                /737776
                                /AC=0
E848, HALT /ERROR; TAD K7S FAILED
      SNL
E849, HALT /ERROR; LINK NOT A 1, CARRY FAILED

```

	CLL	/TEST TAD K7S, AC=M20K, L=0
	LAC M20K	/L=0
	TAD K7S	/AC=757777
	XOR M20KM	/ONES
	SZA	/757776
E850,	HALT	/AC=0
	SNL	/ERROR; TAD K7S FAILED
E851,	HALT	/ERROR; LINK NOT A 1, CARRY FAILED
	CLL	/TEST TAD K7S, AC=M10K, L=0
	LAC M10K	/L=0
	TAD K7S	/AC=767777
	XOR M10KM	/ONES
	SZA	/767776
E852,	HALT	/AC=0
	SNL	/ERROR; TAD K7S FAILED
E853,	HALT	/ERROR; LINK NOT A 1, CARRY FAILED
	CLL	/TEST TAD K7S, AC=M4K, L=0
	LAC M4K	/L=0
	TAD K7S	/AC=773777
	XOR M4KM	/ONES
	SZA	/773776
E854,	HALT	/AC=0
	SNL	/ERROR; TAD K7S FAILED
E855,	HALT	/ERROR; LINK NOT A 1, CARRY FAILED


```

                                /TEST TAD K7S, AC=M100, L=0
                                /L=0
                                /AC=777677
                                /ONES
                                /777676
                                /AC=0
                                /ERROR: TAD K7S FAILED
E864,  HALT
                                /ERROR: LINK NOT A 1, CARRY FAILED
                                /TEST TAD K7S, AC=M40, L=0
                                /L=0
                                /AC=777737
                                /ONES
                                /777736
                                /AC=0
                                /ERROR: TAD K7S FAILED
E866,  HALT
                                /ERROR LINK NOT A 1, CARRY FAILED
                                /TEST TAD K7S, AC=M20, L=0
                                /L=0
                                /AC=777757
                                /ONES
                                /777756
                                /AC=0
                                /ERROR: TAD K7S FAILED
E868,  HALT
                                /ERROR: LINK NOT A 1, CARRY FAILED
E865,  HALT
E867,  HALT
E869,  HALT
```

```
CLL /TEST TAD K7S, AC=M10, L=0
LAC M10 /L=0
TAD K7S /AC=7777767
XOR M10M /7777766
SZA /AC=0
E870, HALT /ERROR; TAD K7S FAILED
SNL
E871, HALT /ERROR; LINK NOT A 1, CARRY FAILED

CLL /TEST TAD K7S, AC=M4, L=0
LAC M4 /L=0
TAD K7S /AC=777773
XOR M4M /777772
SZA /AC=0
E872, HALT /ERROR; TAD K7S FAILED
SNL
E873, HALT /ERROR; LINK NOT A 1, CARRY FAILED

CLL /TEST TAD K7S, AC=M2, L=0
LAC M2 /L=0
TAD K7S /AC=777775
XOR M2M /777774
SZA /AC=0
E874, HALT /ERROR; TAD K7S FAILED
SNL
E875, HALT /ERROR; LINK NOT A 1, CARRY FAILED
```

```
CLL- /TEST TAD K7S, AC=M1, L=0
LAC M1 /L=0
TAD K7S /AC=777776
XOR M1M /ONES
SZA /777775
E876, HALT /AC=0
SNL /ERROR; TAD K7S FAILED
E877, HALT /ERROR; LINK NOT A 1, CARRY FAILED

CLA!CMA!CLL /TEST TAD K7S, AC=ONES, L=0
TAD K7S /AC=ONES, L=0
XOR M1 /ONES
SZA /777776
E878, HALT /AC=0
SNL /ERROR; TAD K7S FAILED
E879, HALT /ERROR; LINK NOT A 1, CARRY FAILED

START
```

AAAAAAAAAA?AA@>III>@?IIIF@?%%!!@@@@@F)))
@/INST TEST TAPE 9

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                                /TEST ADD K1S TO K6S, L=0
                                /L=0
                                /111111
                                ADD K1S
                                ADD K6S
                                /666666
                                CMA
                                /AC=0
                                SZA
E880,   HALT
                                /ERROR; ADD K1S TO K6S FAILED
                                SZL
E881,   HALT
                                /ERROR; LINK NOT A 0

                                /TEST ADD K2S TO K5, L=0
                                /L=0
                                /222222
                                ADD K2S
                                ADD K5S
                                /555555
                                CMA
                                /AC=0
                                SZA
E882,   HALT
                                /ERROR; ADD K2S TO K5S FAILED
                                SZL
E883,   HALT
                                /ERROR; LINK NOT A 0

                                /TEST ADD K3S TO K4S, L=0
                                /L=0
                                /333333
                                ADD K3S
                                ADD K4S
                                /444444
                                CMA
                                /AC=0
                                SZA
E884,   HALT
                                /ERROR; ADD K3S TO K4S FAILED
                                SZL
E885,   HALT
                                /ERROR; LINK NOT A 0
```

```

                                /TEST ADD K4S TO K3S, L=0
                                /L=0
                                /444444
                                /333333
                                /AC=0
E886,  CLL
        ADD K4S
        ADD K3S
        CMA
        SZA
        HALT
        SZL
E887,  HALT
                                /ERROR; ADD K4S TO K3S FAILED
                                /ERROR; LINK NOT A 0

                                /TEST ADD K5S TO K2S, L=0
                                /L=0
                                /555555
                                /222222
                                /AC=0
E888,  CLL
        ADD K5S
        ADD K2S
        CMA
        SZA
        HALT
        SZL
E889,  HALT
                                /ERROR; ADD K5S TO K2S FAILED
                                /ERROR; LINK NOT A 0

                                /TEST AND K6S TO K1S, L=0
                                /L=0
                                /666666
                                /111111
                                /AC=0
E890,  CLL
        ADD K6S
        ADD K1S
        CMA
        SZA
        HALT
        SZL
E891,  HALT
                                /ERROR; ADD K6S TO K1S FAILED
                                /ERROR; LINK NOT A 0
```


	CLL	/TEST ADD K7S TO K0S, L=0
	ADD K7S	/L=0
	ADD K0	/777777
	CMA	/0
	SZA	/AC=0
E892,	HALT	/ERROR; ADD K7S TO K0S FAILED
E893,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLL!CLA!CMA	/TEST ADD 252525, AC=525252, L=0
	LAC K5252	/AC=ONES, L=0
	ADD K2525	/AC=525252
	CMA	/252525
	SZA	/AC=0
E894,	HALT	/ERROR; ADD K2525 TO K5252 FAILED
E895,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLL	/TEST ADD 525252, AC=252525, L=0
	LAC K2525	/L=0
	ADD K5252	/AC=252525
	CMA	/525252
	SZA	/AC=0
E896,	HALT	/ERROR; ADD K5252 TO K2525 FAILED
E897,	SZL	
	HALT	/ERROR; LINK NOT A 0

	CLA:CLL	/TEST ADD M400K, ADD K400K, L=0
	ADD M400K	/AC=0, L=0
	ADD K400K	/AC=377777
	CMA	/400000
	SZA	/AC=0
E897A,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897B, 10710	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD M200K, ADD K200K, L=0
	ADD M200K	/AC=0, L=0
	ADD K200K	/AC=577777
	CMA	/200000
	SZA	/AC=0
E897C,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897D,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD M100K, K100K, L=0
	ADD M100K	/AC=0, L=0
	ADD K100K	/AC=677777
	CMA	/100000
	SZA	/AC=0
E897E,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897F,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD M40K, ADD K40K, L=0
	ADD M40K	/AC=0, L=0
	ADD K40K	/AC=737777
	CMA	/040000
	SZA	/AC=0
E897G,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897H,	SZL	
	HALT	/ERROR; LINK NOT A 0

	CLA:CLL	/TEST ADD M20K, ADD K20K, L=0
	ADD M20K	/AC=0, L=0
	ADD K20K	/AC=757777
	CMA	/020000
	SZA	/AC=0
E897I,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897J,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD M10K, ADD K10K, L=0
	ADD M10K	/AC=0, L=0
	ADD K10K	/AC=767777
	CMA	/010000
	SZA	/AC=0
E897K,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897L,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD M4K, ADD K4K, L=0
	ADD M4K	/AC=0, L=0
	ADD K4K	/AC=773777
	CMA	/004000
	SZA	/AC=0
E897M,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897N,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD M2K, ADD K2K, L=0
	ADD M2K	/AC=0, L=0
	ADD K2K	/AC=775777
	CMA	/002000
	SZA	/AC=0
E897O,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897P,	SZL	
	HALT	/ERROR; LINK NOT A 0

	CLA:CLL	/TEST ADD M1K, ADD K1K, L=0
	ADD M1K	/AC=0, L=0
	ADD K1K	/AC=776777
	CMA	/001000
	SZA	/AC=0
E897Q,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897R,	SZL	
	HALT	/ERROR; LINK NOT A 0

	CLA:CLL	/TEST ADD M400, ADD K400, L=0
	ADD M400	/AC=0, L=0
	ADD K400	/AC=777377
	CMA	/000400
	SZA	/AC=0
E897S,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897T,	SZL	
	HALT	/ERROR; LINK NOT A0

	CLA:CLL	/TEST ADD M200, ADD K200, L=0
	ADD M200	/AC=0, L=0
	ADD K200	/AC=777577
	CMA	/000200
	SZA	/AC=0
E897U,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897V,	SZL	
	HALT	/ERROR; LINK NOT A 0

	CLA:CLL	/TEST ADD M100, ADD K100, L=0
	ADD M100	/AC=0, L=0
	ADD K100	/AC=777677
	CMA	/000100
	SZA	/AC=0
E897W,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897X,	SZL	
	HALT	/ERROR; LINK NOT A 0

	CLA:CLL	/TEST ADD M40, ADD K40, L=0
	ADD M40	/AC=0, L=0
	ADD K40	/AC=777737
	CMA	/000040
	SZA	/AC=0
E897Y,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897Z,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD M20, ADD K20, L=0
	ADD M20	/AC=0, L=0
	ADD K20	/AC = 777757
	CMA	/000020
	SZA	/AC=0
E897AA,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897BB,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD M10, ADD K10, L=0
	ADD M10	/AC=0, L=0
	ADD K10	/AC=777767
	CMA	/000010
	SZA	/AC=0
E897CC,	HALT	/ERROR, INCLUSIVE ADD FAILURE
E897DD,	SZL	
	HALT	/ERROR; LINK NOT A0
	CLA:CLL	/TEST ADD M4, ADD K4, L=0
	ADD M4	/AC=0, L=0
	ADD K4	/AC=777773
	CMA	/000004
	SZA	/AC=0
E897EE,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897FF,	SZL	
	HALT	/ERROR; LINK NOT A 0

	CLA:CLL	/TEST ADD M2, ADD K2, L=0
	ADD M2	/AC=0, L=0
	ADD K2	/AC=777775
	CMA	/000002
	SZA	/AC=0
E897GG,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897HH,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD M1, ADD K1, L=0
	ADD M1	/AC=0, L=0
	ADD K1	/AC=777776
	CMA	/000001
	SZA	/AC=0
E897II,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E897JJ,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD K400K, ADD M400K, L=0
	ADD K400K	/AC=0, L=0
	ADD M400K	/AC=400000
	CMA	/377777
	SZA	/AC=0
E898A,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E898B,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD K200K, ADD M200K, L=0
	ADD K200K	/AC=0, L=0
	ADD M200K	/AC=200000
	CMA	/577777
	SZA	/AC=0
E898C,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E898D,	SZL	
	HALT	/ERROR; LINK NOT A 0

	CLA:CLL	/TEST ADD K100K, ADD M100K, L=0
	ADD K100K	/AC=0, L=0
	ADD M100K	/AC=1000000
	CMA	/677777
	SZA	/AC=0
E898E,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E898F,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD K40K, ADD M40K, L=0
	ADD K40K	/AC=0, L=0
	ADD M40K	/AC=040000
	CMA	/737777
	SZA	/AC=0
E898G,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E898H,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD K20K, M20K, L=0
	ADD K20K	/AC=0, L=0
	ADD M20K	/AC=020000
	CMA	/757777
	SZA	/AC=0
E898I,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E898J,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD K10K, ADD M10K, L=0
	ADD K10K	/AC=0, L=0
	ADD M10K	/AC=010000
	CMA	/767777
	SZA	/AC=0
E898K,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E898L,	SZL	
	HALT	/ERROR; LINK NOT A 0

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E898M,   CLA:CLL           /TEST ADD K4K, ADD M4K, L=0
          ADD K4K           /AC=0, L=0
          ADD M4K           /AC=004000
          CMA               /773777
          SZA               /AC=0
          HALT              /ERROR; INCLUSIVE ADD FAILURE
E898N,   SZL
          HALT              /ERROR; LINK NOT A0

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E898O,   CLA:CLL           /TEST ADD K2K, ADD M2K, L=0
          ADD K2K           /AC=0, L=0
          ADD M2K           /AC=002000
          CMA               /775777
          SZA               /AC=0
          HALT              /ERROR; INCLUSIVE ADD FAILURE
E898P,   SZL
          HALT              /ERROR; LINK NOT A0

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E898Q,   CLA:CLL           /TEST ADD K1K, ADD M1K, L=0
          ADD K1K           /AC=0, L=0
          ADD M1K           /AC=001000
          CMA               /776777
          SZA               /AC=0
          HALT              /ERROR; INCLUSIVE ADD FAILURE
E898R,   SZL
          HALT              /ERROR; LINK NOT A 0

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E898S,   CLA:CLL           /TEST ADD K400, ADD M400, L=0
          ADD K400          /AC=0, L=0
          ADD M400          /AC=000400
          CMA               /777377
          SZA               /AC=0
          HALT              /ERROR; INCLUSIVE ADD FAILURE
E898T,   SZL
          HALT              /ERROR; LINK NOT A 0

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	CLA:CLL	/TEST ADD K200, ADD M200, L=0
	ADD K200	/AC=0, L=0
	ADD M200	/AC=000200
	CMA	/777577
	SZA	/AC=0
E898U,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E898V,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD K100, ADD M100, L=0
	ADD K100	/AC=0, L=0
	ADD M100	/AC=000100
	CMA	/777677
	SZA	/AC=0
E898W,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E898X,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD K40, ADD M40, L=0
	ADD K40	/AC=0, L=0
	ADD M40	/AC=000040
	CMA	/777737
	SZA	/AC=0
E898Y,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E898Z,	SZL	
	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD K20, ADD M20, L=0
	ADD K20	/AC=0, L=0
	ADD M20	/AC=000020
	CMA	/777757
	SZA	/AC=0
E898AA,	HALT	/ERROR; INCLUSIVE ADD FAILURE
E898BB,	SZL	
	HALT	/ERROR; LINK NOT A 0

	CLA:CLL	/TEST ADD K10, ADD M10, L=0
	ADD K10	/AC=0, L=0
	ADD M10	/AC=000010
	CMA	/777767
	SZA	/AC=0
E890CC,	HALT	/ERROR; INCLUSIVE ADD FAILURE
	SZL	
E890DD,	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD K4, ADD M4, L=0
	ADD K4	/AC=0, L=0
	ADD M4	/AC=000004
	CMA	/777773
	SZA	/AC=0
E890EE,	HALT	/ERROR; INCLUSIVE ADD FAILURE
	SZL	
E890FF,	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD K2, ADD M2, L=0
	ADD K2	/AC=0, L=0
	ADD M2	/AC=000002
	CMA	/777775
	SZA	/AC=0
E890GG,	HALT	/ERROR; INCLUSIVE ADD FAILURE
	SZL	
E890HH,	HALT	/ERROR; LINK NOT A 0
	CLA:CLL	/TEST ADD K1, ADD M1, L=0
	ADD K1	/AC=0, L=0
	ADD M1	/AC=000001
	CMA	/777776
	SZA	/AC=0
E890II,	HALT	/ERROR; INCLUSIVE ADD FAILURE
	SZL	
E890JJ,	HALT	/ERROR; LINK NOT A 0
START		

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/PDP-9 INSTRUCTION TEST PART 1 - TAPE 9A
      CLA:CMA:CLL          /TEST ADD K7S, AC=K400K, L=0
      LAC K400K           /AC=ONES, L=0
      ADD K7S             /AC=400K
      AND K7S             /ONES
      XOR K400K          /AC=400K
      SZA                /AC=0
E898.  HALT              /ERROR; ADD-0 TO K400K FAILED
      SZL
E899.  HALT              /ERROR; LINK NOT A ZERO, CARRY FAILED

      /TEST ADD K200K, AC=K200K, L=0
      CLA:CMA:CLL        /AC=ONES, L=0
      LAC K200K          /AC=200K
      ADD K200K          /ONES
      AND K7S            /AC=400K
      XOR K400K
      SZA                /AC=0
E900.  HALT              /ERROR; ADD K200K TO K200K FAILED
      SNL
E901.  HALT              /ERROR; LINK NOT A ONE, CARRY FAILED

      /TEST ADD K7S, AC=K100K, L=1
      CLA:CMA:CLL:CML   /AC=ONES, L=1
      LAC K100K         /AC=100K
      ADD K7S           /ONES
      AND K7S           /AC=100K
      XOR K100K
      SZA                /AC=0
E902.  HALT              /ERROR; ADD-0 TO K100K FAILED
      SNL
E903.  HALT              /ERROR; LINK NOT A ONE, LINK RESET

      /TEST ADD K7S, AC=K40K, L=0
      CLA:CMA:CLL       /AC=ONES, L=0
      LAC K40K          /AC=40K
      ADD K7S           /ONES
      AND K7S           /AC=40K
      XOR K40K
      SZA                /AC=0
E904.  HALT              /ERROR; ADD-0 TO K40K FAILED
      SZL
E905.  HALT              /ERROR; LINK NOT A ZERO, CARRY FAILED

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		/TEST ADD K7S, AC=K20K, L=0
	CLA!CMA!CLL	/AC=ONES, L=0
	LAC K20K	/AC=20K
	ADD K7S	/ONES
	AND K7S	/AC=20K
	XOR K20K	
	SZA	/AC=0
E906,	HALT	/ERROR; ADD-0 TO K20K FAILED
	SZL	
E907,	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED
		/TEST AND K7S, AC=K10K, L=0
	CLA!CMA!CLL	/AC=ONES, L=0
	LAC K10K	/AC=10K
	ADD K7S	/ONES
	AND K7S	/AC=10K
	XOR K10K	
	SZA	/AC=0
E908,	HALT	/ERROR; ADD-0 TO K10K FAILED
	SZL	
E909,	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED
		/TEST ADD K7S, AC=K4K, L=0
	CLA!CMA!CLL	/AC=ONES, L=0
	LAC K4K	/AC=4K
	ADD K7S	/ONES
	AND K7S	/AC=4K
	XOR K4K	
	SZA	/AC=0
E910,	HALT	/ERROR; ADD-0 TO K4K FAILED
	SZL	
E911,	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED

	CLA:CMA:CLL	/TEST ADD K7S, AC=K2K, L=0
	LAC K2K	/AC=ONES, L=0
	ADD K7S	/AC=2K
	AND K7S	/ONES
	XOR K2K	/AC=2K
	SZA	/AC=0
E912.	HALT	/ERROR; ADD-0 TO K2K FAILED
E913.	SZL	
	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED
	CLA:CMA:CLL	/TEST ADD K7S, AC=K1K, L=0
	LAC K1K	/AC=ONES, L=0
	ADD K7S	/AC=1K
	AND K7S	/ONES
	XOR K1K	/AC=1K
	SZA	/AC=0
E914.	HALT	/ERROR; ADD-0 TO K1K FAILED
E915.	SZL	
	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED
	CLA:CMA:CLL	/TEST ADD K7S, AC=K400, L=0
	LAC K400	/AC=ONES, L=0
	ADD K7S	/AC=400
	AND K7S	/ONES
	XOR K400	/AC=400
	SZA	/AC=0
E916.	HALT	/ERROR; ADD-0 TO K400 FAILED
E917.	SZL	
	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED

		/TEST ADD K7S, AC=K200, L=0
	CLA!CMA!CLL	/AC=ONES, L=0
	LAC K200	/AC=200
	ADD K7S	/ONES
	AND K7S	/AC=200
	XOR K200	
	SZA	/AC=0
E918.	HALT	/ERROR; ADD-0 TO K200 FAILED
	SZL	
E919.	HALT	/ERROR; ADD LINK NOT A ZERO, CARRY FAILED
		/TEST ADD K7S, AC=K100, L=0
	CLA!CMA!CLL	/AC=ONES, L=0
	LAC K100	/AC=100
	ADD K7S	/ONES
	AND K7S	/AC=100
	XOR K100	
	SZA	/AC=0
E920.	HALT	/ERROR; ADD -0 TO K100 FAILED
	SZL	
E921.	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED
		/TEST ADD K7S, AC=K40K; L=0
	CLA!CMA!CLL	/AC=ONES, L=0
	LAC K40	/AC=40
	ADD K7S	/ONES
	AND K7S	/AC=40
	XOR K40	
	SZA	/AC=0
E922.	HALT	/ERROR; ADD-0 TO K40 FAILED
	SZL	
E923.	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED

	CLA!CMA!CLL	/TEST ADD K7S, AC=K20 L=0
	LAC K20	/AC=ONES, L=0
	ADD K7S	/AC=20
	AND K7S	/ONES
	XOR K20	/AC=20
	SZA	/AC=0
E924,	HALT	/ERROR; ADD -0 TO K20 FAILED
E925,	SZL	
	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED
	CLA!CMA!CLL	/TEST ADD K7S, AC=K10, L=0
	LAC K10	/AC=ONES, L=0
	ADD K7S	/AC=10
	AND K7S	/ONES
	XOR K10	/AC=10
	SZA	/AC=0
E926,	HALT	/ERROR; ADD=0 TO K10 FAILED
E927,	SZL	
	HALT	/ERROR; LINK NOT A ZERO CARRY FAILED
	CLA!CMA!CLL	/TEST ADD K7S, AC=4, L=0
	LAC K4	/AC=ONES, L=0
	ADD K7S	/AC=4
	AND K7S	/ONES
	XOR K4	/AC=4
	SZA	/AC=0
E928,	HALT	/ERROR; ADD -0 TO K4 FAILED
E929,	SZL	
	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED

	CLA!CMA!CLL	/TEST ADD K7S, AC=K2 L=0
	LAC K2	/AC=ONES, L=0
	ADD K7S	/AC=2
	AND K7S	/ONES
	XOR K2	/AC=2
	SZA	/AC=0
E930.	HALT	/ERROR; ADD-0 TO K2 FAILED
	SZL	
E931.	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED
	CLA!CMA!CLL	/TEST ADD K7S, AC=K1, L=0
	LAC K1	/AC=ONES, L=0
	ADD K7S	/AC=1
	AND K7S	/ONES
	XOR K1	/AC=1
	SZA	/AC=0
E932.	HALT	/ERROR; ADD-0 TO K1 FAILED
	SZL	
E933.	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED

	CLL	/TEST ADD K400K, AC=ONES, L=0
	LAW 17777	/L=0
	AND K7S	/AC=ONES
	ADD K400K	/AC=ONES /400K
	XOR K400K	
E934.	SZA	/AC=0
	HALT	/ERROR; ADD K400K TO -0 FAILED
E935.	SZL	
	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED
	CLL!CML	/TEST ADD K200K, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K200K	/AC=ONES /200K
	XOR K200K	
E936.	SZA	/AC=0
	HALT	/ERROR; ADD K200K TO - 0 FAILED
	SNL	
E937.	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL!CML	/TEST ADD K100K, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K100K	/AC=ONES /100K
	XOR K100K	
E938.	SZA	/AC=0
	HALT	/ERROR; ADD K100K TO -0 FAILED
	SNL	
E939.	HALT	/ERROR; LINK NOT A ONE, LINK RESET

	CLL:CML	/TEST ADD K40K, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K40K	/40K
	XOR K40K	
	SZA	/AC=0
E940,	HALT	/ERROR; ADD K40K TO -0 FAILED
	SNL	
E941,	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL:CML	/TEST ADD K20K, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K20K	/20K
	XOR K20K	
	SZA	/AC=0
E942,	HALT	/ERROR; ADD K20K TO -0 FAILED
	SNL	
E943,	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL:CML	/TEST ADD K10K, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K10K	/10K
	XOR K10K	
	SZA	/AC=0
E944,	HALT	/ERROR; ADD K10, TO -0 FAILED
	SNL	
E945,	HALT	/ERROR; LINK NOT A ONE, LINK RESET

	CLL:CML	/TEST ADD K4K, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K4K	/AC=ONES
	XOR K4K	/4K
E946,	SZA	/AC=0
	HALT	/ERROR; ADD K4K TO -0 FAILED
E947,	SNL	
	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL:CML	/TEST ADD K2K, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K2K	/AC=ONES
	XOR K2K	/2K
E948,	SZA	/AC=0
	HALT	/ERROR; ADD K2K TO -0 FAILED
E949,	SNL	
	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL:CML	/TEST ADD K1K, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K1K	/AC=ONES
	XOR K1K	/1K
E950,	SZA	/AC=0
	HALT	/ERROR; ADD K1K TO -0 FAILED
E951,	SNL	
	HALT	/ERROR; LINK NOT A ONE, LINK RESET

E952,	CLL!CML	/TEST ADD K400, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K400	/AC=ONES
	XOR K400	/400
	SZA	/AC=0
E953,	HALT	/ERROR; ADD K400 TO -0 FAILED
	SNL	
	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL!CML	/TEST ADD K200, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K200	/AC=ONES
	XOR K200	/200
	SZA	/AC=0
E954,	HALT	/ERROR; ADD K200 TO-0 FAILED
	SNL	
E955,	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL!CML	/TEST ADD K100, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K100	/AC=ONES
	XOR K100	/100
	SZA	/AC=0
E956,	HALT	/ERROR; ADD K100 TO -0 FAILED
	SNL	
E957,	HALT	/ERROR; LINK NOT A ONE, LINK RESET

	CLL:CML	/TEST ADD K40, AC=ONES, L=1
	LAW 17777	/L=1 /AC=ONES
	AND K7S	/AC=ONES
	ADD K40	/40
	XOR K40	
	SZA	/AC=0
E958,	HALT	/ERROR; ADD K40 TO -0 FAILED
	SNL	
E959,	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL:CML	/TEST ADD K20, AC=ONES, L=1
	LAW 17777	/L=1 /AC=ONES
	AND K7S	/AC=ONES
	ADD K20	/20
	XOR K20	
	SZA	/AC=0
E960,	HALT	/ERROR; ADD K20 TO -0 FAILED
	SNL	
E961,	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL:CML	/TEST ADD K10, AC=ONES, L=1
	LAW 17777	/L=1 /AC=ONES
	AND K7S	/AC=ONES
	ADD K10	
	XOR K10	
	SZA	/AC=0
E962,	HALT	/ERROR; ADD K10 TO -0 FAILED
	SNL	
E963,	HALT	/ERROR; LINK NOT A ONE, LINK RESET

	CLL!CML	/TEST ADD K4, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K4	/4
	XOR K4	
	SZA	/AC=0
E964.	HALT	/ERROR; ADD K4 TO -0 FAILED
E965.	SNL	
	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL!CML	/TEST ADD K2, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K2	/AC=ONES
	XOR K2	/2
	SZA	/AC=0
E966.	HALT	/ERROR; ADD K2 TO-0 FAILED
E967.	SNL	
	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL!CML	/TEST ADD K1, AC=ONES, L=1
	LAW 17777	/L=1
	AND K7S	/AC=ONES
	ADD K1	/1
	XOR K1	
	SZA	/AC=0
E968.	HALT	/ERROR; ADD K1 TO-0 FAILED
E969.	SNL	
	HALT	/ERROR; LINK NOT A ONE, LINK RESET

	CLL	/TEST ADD K7S, AC=ONES, L=0
	LAC K7S	/L=0
	ADD K7S	/AC=ONES
	CMA	/ONES
	SZA	/AC=ONES
E970,	HALT	/AC=0
	SZL	/ERROR; ADD K7S TO ALL ONES FAILED
E971,	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL!CML	/TEST ADD 525253, AC=252525, L=1
	LAC K2525	/L=1
	ADD K5253	/AC=252525
	XOR K1	/5252
	SZA	/000001
E972,	HALT	/AC=0
	SNL	/ERROR; ADD K5253 TO K5252 FAILED
E973,	HALT	/ERROR; LINK NOT A ONE, LINK RESET
	CLL	/TEST ADD 252525, AC=525253 L=0
	LAC K5253	/L=0
	ADD K2525	/AC=525253
	XOR K1	/252525
	SZA	/000001
E974,	HALT	/AC=0
	SZL	/ERROR; ADD K2525 TO K5253 FAILED
E975,	HALT	/ERROR; LINK NOT A ZERO, CARRY FAILED

```
CLL
ADD K1S      /AC=111111
ADD K2S      /AC=333333
ADD K3S      /AC=666666
ADD K4S      /AC=333333, L=1
ADD K5S      /AC=111111,
ADD K6S      /AC=777777
ADD K7S      /AC=777777,
CMA          /AC=0
SZA
E976.      HALT
           /ERROR; ADD SERIES FAILED
E977.      SNL
           /ERROR; LINK NOT A 1
           HALT
START
```


/TAPE 10 PART 3

LAC <400K
SAD <0
E978, HALT

/TEST SAD <0S, AC=K400K
/AC=400K
/0
/ERROR; SAD <0S FAILED TO SKIP, AC=400K

LAC <200K
SAD <0
E979, HALT

/TEST SAD <0S, AC=K200K
/AC=200K
/0
/ERROR; SAD <0S FAILED TO SKIP, AC=K200K

LAC <100K
SAD <0
E980, HALT

/TEST SAD <0S, AC=K100K
/AC=100K
/0
/ERROR; SAD <0S FAILED TO SKIP, AC=K100K

LAC <40K
SAD <0
E981, HALT

/TEST SAD <0S, AC=K40K
/AC=40K
/0
/ERROR; SAD <0S FAILED TO SKIP, AC=40K

LAC <20K
SAD <0
E982, HALT

/TEST SAD <0S, AC=K20K
/AC=20K
/0
/ERROR; SAD <0S FAILED TO SKIP, AC=K20K

LAC <10K
SAD <0
E983, HALT

/TEST SAD <0S, AC=K10K
/AC=10K
/0
/ERROR; SAD <0S FAILED TO SKIP, AC=10K

```
E984,  LAC K4K      /TEST SAD K0S, AC=K4K
        SAJ K0      /AC=4K
        HALT       /0
                /ERROR; SAD K0S FAILED TO SKIP, AC=K4K

E985,  LAC K2K      /TEST SAD K0S, AC=K2K
        SAJ K0      /AC=2K
        HALT       /0
                /ERROR; SAD K0S FAILED TO SKIP, AC=K2K

E986,  LAC K1K      /TEST SAD K0S, AC=K1K
        SAJ K0      /AC=1K
        HALT       /0
                /ERROR; SAD K0S FAILED TO SKIP, AC=K1K

E987,  LAC K400     /TEST SAD K0S, AC=K400
        SAJ K0      /AC=400
        HALT       /0
                /ERROR; SAD K0S FAILED TO SKIP, AC=K400

E988,  LAC K200     /TEST SAD K0S, AC=K200
        SAJ K0      /AC=200
        HALT       /0
                /ERROR; SAD K0S FAILED TO SKIP, AC=K200

E989,  LAC K100     /TEST SAD K0S, AC=K100
        SAJ K0      /AC=100
        HALT       /0
                /ERROR; SAD K0S FAILED TO SKIP, AC=K100

E990,  LAC K40      /TEST SAD K0S, AC=K40
        SAJ K0      /AC=40
        HALT       /0
                /ERROR; SAD K0S FAILED TO SKIP, AC=K40
```

E991.	LAC <20 SAD <0 HALT	/TEST SAD K0S, AC=K20 /AC=20 /0 /ERROR; SAD K0S FAILED TO SKIP, AC=K20
E992.	LAC <10 SAD <0 HALT	/TEST SAD K0S, AC=K10 /AC=10 /0 /ERROR; SAD K0S FAILED TO SKIP, AC=K10
E993.	LAC <4 SAD <0 HALT	/TEST SAD K0S, AC=K4 /AC=4 /0 /ERROR; SAD K0S FAILED TO SKIP, AC=K4
E994.	LAC <2 SAD <0 HALT	/TEST SAD K0S, AC=K2 /AC=2 /0 /ERROR; SAD K0S FAILED TO SKIP, AC=K2
E995.	LAC <1 SAD <0 HALT	/TEST SAD K0S, AC=K1 /AC=1 /0 /ERROR; SAD K0S FAILED TO SKIP, AC=K1
E996.	CLA SAD <400K HALT	/TEST SAD K400K, AC=0 /AC=0 /400K /ERROR; SAD K400K FAILED TO SKIP, AC=0
E997.	CLA SAD <200K HALT	/TEST SAD K200K, AC=0 /AC=0 /200K /ERROR; SAD K200K FAILED TO SKIP, AC=0
E998.	CLA SAD <100K HALT	/TEST SAD K100K, AC=0 /AC=0 /100K /ERROR; SAD K100K FAILED TO SKIP, AC=0

```
          CLA          /TEST SAD K40K, AC=0
          SAD K40K     /AC=0
E999,    HALT         /40K
          /ERROR; SAD K40K FAILED TO SKIP, AC=0

          CLA          /TEST SAD K20K, AC=0
          SAD K20K     /AC=0
E1000,   HALT         /20K
          /ERROR; SAD K10K FAILED TO SKIP, AC=0

          CLA          /TEST SAD K10K, AC=0
          SAD K10K     /AC=0
E1001,   HALT         /10K
          /ERROR; SAD K10, FAILED TO SKIP, AC=0

          CLA          /TEST SAD K4K, AC=0
          SAD K4K      /AC=0
E1002,   HALT         /4K
          /ERROR; SAD K4K FAILED TO SKIP, AC=0

          CLA          /TEST SAD K4K, AC=0
          SAD K2K      /AC=0
K1003,   HALT         /2K
          /ERROR; SAD K2K FAILED TO SKIP, AC=0

          CLA          /TEST SADDK1K, AC=0
          SAD K1K      /AC=0
E1004,   HALT         /1K
          /ERROR; SAD K1K FAILED TO SKIP, AC=0

          CLA          /TEST SAD K400, AC=0
          SAD K400     /AC=0
E1005,   HALT         /400
          /ERROR; SAD K400 FAILED TO SKIP, AC=0

          CLA          /TEST SAD K200, AC=0
          SAD K200     /AC=0
E1006,   HALT         /200
          /ERROR; SAD K200 FAILED TO SKIP, AC=0
```

```

      CLA
      SAD <100
E1007, HALT
      /TEST SAD <100, AC=0
      /AC=0
      /100
      /ERROR; SAD <100 FAILED TO SKIP, AC=0

      CLA
      SAD <40
E1008, HALT
      /TEST SAD <40, AC=0
      /AC=0
      /40
      /ERROR; SAD <40 FAILED TO SKIP, AC=0

      CLA
      SAD <20
E1009, HALT
      /TEST SAD <20, AC=0
      /AC=0
      /20
      /ERROR; SAD <20 FAILED TO SKIP, AC=0

      CLA
      SAD <10
E1010, HALT
      /TEST SAD <10, AC=0
      /AC=0
      /10
      /ERROR; SAD <10 FAILED TO SKIP, AC=0

      CLA
      SAD <4
E1011, HALT
      /TEST SAD <4, AC=0
      /AC=0
      /4
      /ERROR; SAD <4 FAILED TO SKIP, AC=0

      CLA
      SAD <2
E1012, HALT
      /TEST SAD <2, AC=0
      /AC=0
      /2
      /ERROR; SAD <2 FAILED TO SKIP, AC=0
```

E1013,	CLA SAD K1 HALT	/TEST SAD K1, AC=0 /AC=0 /1 /ERROR; SAD K1 FAILED TO SKIP, AC=0
E1014,	LAW 17777 SAD M400K HALT	/TEST SAD M400K, AC=0NES /AC=0NES /377777 /ERROR; SAD M400K FAILED TO SKIP, AC=0NES
E1015,	LAW 17777 SAD M200K HALT	/TEST SAD M200K, AC=0NES /AC=0NES /577777 /ERROR; SAD M200K FAILED TO SKIP, AC=0NES
E1016,	LAW 17777 SAD M100K HALT	/TEST SAD M100K, AC=0NES /AC=0NES /677777 /ERROR; SAD M100K FAILED TO SKIP, AC=0NES
E1017,	LAW 17777 SAD M40K HALT	/TEST SAD M40K, AC=0NES /AC=0NES /737777 /ERROR; SAD M40K FAILED TO SKIP, AC=0NES
E1018,	LAW 17777 SAD M20K HALT	/TEST SAD M20K, AC=0NES /AC=0NES /7577777 /ERROR; SAD M20K FAILED TO SKIP, AC=0NES
E1019,	LAW 17777 SAD M10K HALT	/TEST SAD M10K, AC=0NES /AC=0NES /767777 /ERROR; SAD M10K FAILED TO SKIP, AC=0NES
E1020,	LAW 17777 SAD M4K HALT	/TEST SAD M4K, AC=0NES /AC=0NES /773777 /ERROR; SAD M4K FAILED TO SKIP, AC=0NES



```

LAW 17777      /TEST SAD M2K, AC=ONES
SAD M2K        /AC=ONES
E1021, HALT    /775777
                /ERROR; SAD M2K FAILED TO SKIP, AC=ONES

LAW 17777      /TEST SAD M1K, AC=ONES
SAD M1K        /AC=ONES
E1022, HALT    /776777
                /ERROR; SAD M1K FAILED TO SKIP, AC=ONES

LAW 17777      /TEST SAD M400, AC=ONES
SAD M400       /AC=ONES
E1023, HALT    /777377
                /ERROR; SAD M400 FAILED TO SKIP, AC=ONES

LAW 17777      /TEST SAD M200, AC=ONES
SAD M200       /AC=ONES
E1024, HALT    /777577
                /ERROR; SAD M200 FAILED TO SKIP, AC=ONES

LAW 17777      /TEST SAD M100, AC=ONES
SAD M100       /AC=ONES
E1025, HALT    /777677
                /ERROR; SAD M100 FAILED TO SKIP, AC=ONES

LAW 17777      /TEST SAD M40, AC=ONES
SAD M40        /AC=ONES
E1026, HALT    /777737
                /ERROR; SAD M40 FAILED TO SKIP, AC=ONES

LAW 17777      /TEST SAD M20, AC=ONES
SAD M20        /AC=ONES
E1027, HALT    /777757
                /ERROR; SAD M20 FAILED TO SKIP, AC=ONES

LAW 17777      /TEST SAD M10, AC=ONES
SAD M10        /AC=ONES
E1028, HALT    /777767
                /ERROR; SAD M10 FAILED TO SKIP AC=ONES

```

```

E1029, LAW 17777 /TEST SAD M4, AC=ONES
        SAD M4 /AC=ONES
        HALT /777773
        /ERROR; SAD M4 FAILED TO SKIP, AC=ONES

E1030, LAW 17777 /TEST SAD M2, AC=ONES
        SAD M2 /AC=ONES
        HALT /777775
        /ERROR; SAD M2 FAILED TO SKIP, AC=ONES

E1031, LAW 17777 /TEST SAD M1, AC=ONES
        SAD M1 /AC=ONES
        HALT /777776
        /ERROR; SAD M1 FAILED TO SKIP, AC=ONES

E1032, CLA /TEST SAD K7S, AC=M400K
        TAD M400K /AC=0
        SAD K7S /AC=377777
        HALT /ONES
        /ERROR; SAD K7S FAILED TO SKIP, AC=M400K

E1033, CLA /TEST SAD K7S, AC=M200K
        TAD M200K /AC=0
        SAD K7S /AC=577777
        HALT /ONES
        /ERROR; SAD K7S FAILED TO SKIP, AC=M200K

E1034, CLA /TEST SAD K7S, AC=M100K
        TAD M100K /AC=0
        SAD K7S /AC=677777
        HALT /ONES
        /ERROR; SAD K7S FAILED TO SKIP, AC=M100K

E1035, CLA /TEST SAD K7S, AC=M40K
        TAD M40K /AC=0
        SAD K7S /AC=737777
        HALT /ONES
        /ERROR; SAD K7S FAILED TO SKIP, AC=M40K

E1036, CLA /TEST SAD K7S, AC=M20K
        TAD M20K /AC=0
        SAD K7S /AC=757777
        HALT /ONES
        /ERROR; SAD K7S FAILED TO SKIP, AC=M20K

```


E1037,	CLA TAD M10K SAD K7S HALT	/TEST SAD K7S, AC=M10K /AC=0 /AC=767777 /ONES /ERROR; SAD K7S FAILED TO SKIP, AC=M10K
E1038,	CLA TAD M4K SAD K7S HALT	/TEST SAD K7S, AC=M4K /AC=0 /AC=773777 /ONES /ERROR; SAD K7S FAILED TO SKIP, AC=M4K
E1039,	CLA TAD M2K SAD K7S HALT	/TEST SAD K7S, AC=M2K /AC=0 /AC=775777 /ONES /ERROR; SAD K7S FAILED TO SKIP, AC=M2K
E1040,	CLA TAD M1K SAD K7S HALT	/TEST SAD K7S, AC=M1K /AC=0 /AC=776777 /ONES /ERROR; SAD K7S FAILED TO SKIP, AC=M1K
E1041,	CLA TAD M400 SAD K7S HALT	/TEST SAD K7S, AC=M400 /AC=0 /AC=777377 /ONES /ERROR; SAD K7S FAILED TO SKIP, AC=M400
E1042,	CLA TAD M200 SAD K7S HALT	/TEST SAD K7S AC=M200 /AC=0 /AC=777577 /ONES /ERROR; SAD K7S FAILED TO SKIP, AC=M200

```

E1043,  CLA          /TEST SAD K7S, AC=M100
        TAD M100      /AC=0
        SAD K7S       /AC=777677
        HALT          /ONES
                /ERROR; SAD K7S FAILED TO SKIP, AC=M100

E1044,  CLA          /TEST SAD K7S, AC=M40
        TAD M40      /AC=0
        SAD K7S       /AC=777737
        HALT          /ERROR; SAD K7S FAILED TO SKIP, AC=M40

E1045,  CLA          /TEST SAD K7S, AC=M20
        TAD M20      /AC=0
        SAD K7S       /AC=777757
        HALT          /ERROR; SAD K7S FAILED TO SKIP, AC=M20

E1046,  CLA          /TEST SAD K7S, AC=M10
        TAD M10      /AC=0
        SAD K7S       /AC=777767
        HALT          /ERROR; SAD K7S FAILED TO SKIP, AC=M10

E1047,  CLA          /TEST SAD K7S, AC=M4
        TAD M4       /AC=0
        SAD K7S       /AC=777773
        HALT          /ERROR; SAD K7S FAILED TO SKIP, AC=M4

E1048,  CLA          /TEST SAD K7S, AC=M2
        TAD M2       /AC=0
        SAD K7S       /AC=777775
        HALT          /ERROR; SAD K7S FAILED TO SKIP, AC=M2

E1049,  CLA          /TEST SAD K7S, AC=M1
        TAD M1       /AC=0
        SAD K7S       /AC=777776
        HALT          /ERROR; SAD K7S FAILED TO SKIP AC=M1

```

```
LAC K400K      /TEST SAD K400K, AC=K400K
SAD K400K      /AC=400K
SKP           /400K
E1050, HALT    /ERROR; SAD K400K SKIPPED, AC=K400K

LAC K200K      /TEST SAD K200K, AC=K200K
SAD K200K      /AC=200K
SKP           /200K
E1051, HALT    /ERROR; SAD K200K SKIPPED, AC=K200K

LAC K100K      /TEST SAD K100K, AC=100K
SAD K100K      /AC=100K
SKP           /100K
E1052, HALT    /ERROR; SAD K100K SKIPPED, AC=K100K

LAC K40K       /TEST SAD K40K, AC=K40K
SAD K40K       /AC=40K
SKP           /40K
E1053, HALT    /ERROR; SAD K40K SKIPPED, AC=K40K

LAC K20K       /TEST SAD K20K, AC=K20K
SAD K20K       /AC=20K
SKP           /20K
E1054, HALT    /ERROR; SAD K20K SKIPPED, AC=K20K

LAC K10K       /TEST SAD K10K, AC=K10K
SAD K10K       /AC=10K
SKP           /10K
E1055, HALT    /ERROR; SAD K10K SKIPPED, AC=K10K
```

```

LAC 44K      /TEST SAD 44K, AC=K4K
SAD 44K      /AC4K
SKP          /4K
E1056, HALT  /ERROR; SAD 44K SKIPPED, AC=K4K

LAC 42K      /TEST SAD 42K, AC=K2K
SAD 42K      /AC=2K
SKP          /2K
E1057, HALT  /ERROR; SAD 42K SKIPPED, AC=K2K

LAC 41K      /TEST SAD 41K, AC=K1K
SAD 41K      /AC=1K
SKP          /1K
E1058, HALT  /ERROR; SAD 41K SKIPPED, AC=K1K

LAC 400      /TEST SAD 400, AC=400
SAD 400      /AC=400
SKP          /400
E1059, HALT  /ERROR; SAD 400 SKIPPED, AC=400

LAC 200      /TEST SAD 200, AC=200
SAD 200      /AC=200
SKP          /200
E1060, HALT  /ERROR; SAD 200 SKIPPED, AC=200

LAC 100      /TEST SAD 100, AC=100
SAD 100      /AC=100
SKP          /100
E1061, HALT  /ERROR; SAD 100 SKIPPED, AC=K2
```

```

LAC K40
SAD K40
SKP
E1062, HALT
/TEST SAD K40, AC=K40
/AC=40
/40
/ERROR: SAD K40 SKIPPED, AC=K40

LAC K20
SAD K20
SKP
E1063, HALT
/TEST SAD K20, AC=K20
/AC=20
/20
/ERROR: SAD K20 SKIPPED, AC=K20

LAC K10
SAD K10
SKP
E1064, HALT
/TEST SAD K10, AC=K10
/AC=10
/10
/ERROR: SAD K10 SKIPPED, AC=K10

LAC K4
SAD K4
SKP
E1065, HALT
/TEST SAD K4, AC=K4
/AC=4
/4
/ERROR: SAD K4 SKIPPED, AC=K4

LAC K2
SAD K2
SKP
E1066, HALT
/TEST SAD K2, AC=K2
/AC=2
/2
/ERROR: SAD K2 SKIPPED, AC=K2

LAC K1
SAD K1
SKP
E1067, HALT
/TEST SAD K1, AC=K1
/AC=1
/1
/ERROR: SAD K1 SKIPPED, AC=K1
```

```

          /TEST SAD M400K, AC=M400K L=0
          /AC=ONES, L=0
          /AC=377777  _=1
          /377777
CLA: CMA: CLL
ADD M400K
SAD M400K
SKP
E1068, HALT /ERROR: SAD M400K SKIPPED, AC=M400K
      SZL
E1069, HALT /ERROR: LINK NOT A 0

          /TEST SAD M200K, AC=M200K L=0
          /AC=ONES, L=0
          /AC=577777  _=1
          /577777
CLA: CMA: CLL
ADD M200K
SAD M200K
SKP
E1070, HALT /ERROR: SAD M200K SKIPPED, AC=M200K
      SZL
E1071, HALT /ERROR: LINK NOT A 0

          /TEST SAD M100K, AC=M100K L=0
          /AC=ONES, L=0
          /AC=677777  _=1
          /677777
CLA: CMA: CLL
ADD M100K
SAD M100K
SKP
E1072, HALT /ERROR: SAD M100K SKIPPED, AC=M100K
      SZL
E1073, HALT /ERROR: LINK NOT A 0

          /TEST SAD M40K, AC=M40K L=0
          /AC=ONES, L=0
          /AC=737777  _=1
          /737777
CLA: CMA: CLL
ADD M40K
SAD M40K
SKP
E1074, HALT /ERROR: SAD M40K SKIPPED, AC=M40K
      SZL
E1075, HALT /ERROR: LINK NOT A 0

```

	CLA:OMA:CLL	/TEST SAD M20K, AC=M20K L=0
	ADD M20K	/AC=ONES, L=0
	SAD M20K	/AC=757777 L=1
	SKP	/757777
E1076,	HALT	/ERROR; SAD M20K SKIPPED, AC=M20K
	SZL	
E1077,	HALT	/ERROR; LINK NOT A 0
	CLA:OMA:CLL	/TEST SAD M100K, AC=M10K L=0
	ADD M10K	/AC=ONES, L=0
	SAD M10K	/AC=767777 L=1
	SKP	/767777
E1078,	HALT	/ERROR; SAD M10K SKIPPED, AC=M10K
	SZL	
E1079,	HALT	/ERROR; LINK NOT A 0
	CLA:OMA:CLL	/TEST SAD M4K, AC=M4K L=0
	ADD M4K	/AC=ONES, L=0
	SAD M4K	/AC=773777 L=1
	SKP	/773777
E1080,	HALT	/ERROR; SAD M4K SKIPPED, AC=M4K
	SZL	
E1081,	HALT	/ERROR; LINK NOT A 0
	CLA:OMA:CLL	/TEST SAD M2K, AC=M2K L=0
	ADD M2K	/AC=ONES, L=0
	SAD M2K	/AC=775777 L=1
	SKP	/775777
E1082,	HALT	/ERROR; SAD M2K SKIPPED, AC=M2K
	SZL	
E1083,	HALT	/ERROR; LINK NOT A 0

```

          /TEST SAD M1K, AC=M1K L=0
          /AC=ONES, L=0
CLA:OMA:CLL
ADD M1K      /AC=776777 L=1
SAD M1K      /776777
SKP
E1084, HALT      /ERROR: SAD M1K SKIPPED, AC=M1K
          SZL
E1085, HALT      /ERROR: LINK NOT A 0

          /TEST SAD M400, AC=M400 L=0
          /AC=ONES, L=0
CLA:OMA:CLL
ADD M400     /AC=777377 L=1
SAD M400     /777377
SKP
E1086, HALT      /ERROR: SAD M400 SKIPPED, AC=M400
          SZL
E1087, HALT      /ERROR: LINK NOT A 0

          /TEST SAD M200, AC=M200 L=0
          /AC=ONES, L=0
CLA:OMA:CLL
ADD M200     /AC=777577 L=1
SAD M200     /777577
SKP
E1088, HALT      /ERROR: SAD M200 SKIPPED, AC=M200
          SZL
E1089, HALT      /ERROR: LINK NOT A 0

          /TEST SAD M100, AC=M100 L=0
          /AC=ONES, L=0
CLA:OMA:CLL
ADD M100     /AC=777677 L=1
SAD M100     /777677
SKP
E1090, HALT      /ERROR: SAD M100 SKIPPED, AC=M100
          SZL
E1091, HALT      /ERROR: LINK NOT A 0

```



```

                                /TEST SAD M40, AC=M40 L=0
                                /AC=ONES, L=0
CLA:OMA:CLL                    /AC=777737    L=1
ADD M40                          /777737
SAD M40
SKP
E1092, HALT                      /ERROR; SAD M40 SKIPPED, AC=M40
SZL
E1093, HALT                      /ERROR; LINK NOT A 0

                                /TEST SAD M20, AC=M20 L=0
                                /AC=ONES, L=0
CLA:OMA:CLL                    /AC=777757    L=1
ADD M20                          /777757
SAD M20
SKP
E1094, HALT                      /ERROR; SAD M20 SKIPPED, AC=M20
SZL
E1095, HALT                      /ERROR; LINK NOT A 0

                                /TEST SAD M10, AC=M10 L=0
                                /AC=ONES, L=0
CLA:OMA:CLL                    /AC=777767    L=1
ADD M10                          /777767
SAD M10
SKP
E1096, HALT                      /ERROR; SAD M10 SKIPPED, AC=M10
SZL
E1097, HALT                      /ERROR; LINK NOT A 0

                                /TEST SAD M4, AC=M4 L=0
                                /AC=ONES, L=0
CLA:OMA:CLL                    /AC=777773    L=1
ADD M4                          /777773
SAD M4
SKP
E1098, HALT                      /ERROR; SAD M4 SKIPPED, AC=M4
SZL
E1099, HALT                      /ERROR; LINK NOT A 0
```



```
          /TEST SAD-SKP SERIES
CLA      /AC=0
SAD 47S  /ONES
LAN 1    /760001
SKP
LAN 2    /760002
SAD 47S  /ONES
LAN 4    /760004
SKP
LAN 10   /760010
SAD 47S  /ONES
LAN 20   /760020
SZA
E1105, HALT      /ERROR: SAD-SKP SERIES FAILED, AC NOT 0
LAC COUNT
TAD 41
DAC COUNT
SZA
JMP PART1
LAN 207
TLS
TSF
JMP , -1
OAS:CLA
DAC COUNT
JMP PART1
```

START

/POP-9 INSTRUCTION TEST PART I - END TAPE

/CONSTANTS

NOP1=NOP

NOP2=NOP

NOP3=NOP

HALT=HLT

K0,	0
K400K,	400000
K200K,	200000
K100K,	100000
K40K,	40000
K20K,	20000
K10K,	10000
K4K,	4000
K2K,	2000
K1K,	1000
K400,	400
K200,	200
K100,	100
K40,	40
K20,	20
K10,	10
K4,	4
K2,	2
K1,	1
K1S,	111111
K2S,	222222
K3S,	333333
K4S,	444444
K5S,	555555
K6S,	666666
K7S,	777777
M400K,	377777
M200K,	577777
M100K,	677777
M40K,	737777
M20K,	757777
M10K,	767777
M4K,	773777
M2K,	775777
M1K,	776777
M400,	777377
M200,	777577
M100,	777677
M40,	777737
M20,	777757
M10,	777767
M4,	777773
M2,	777775
M1,	777776
M400KM,	377776

M200KM, 577776
M100KM, 677776
M40KM, 737776
M20KM, 757776
M10KM, 767776
M4KM, 773776

K5252, 525252
K2525, 252525
M2KM, 775776
M1KM, 776776
M400M, 777376
M200M, 777576
M100M, 777676
M40M, 777736
M20M, 777756
M10M, 777766
M4M, 777772
M2M, 777774
M1M, 777775

K3, 3
K7, 7
K17, 17
K37, 37
K77, 77
K177, 177
K377, 377
K777, 777
K1777, 1777
K3777, 3777
K7777, 7777
K17777, 17777
K37777, 37777
K77777, 77777
M600K, 177777
M3, 777774
M7, 777770
M17, 777760
M37, 777740
M77, 777720
M177, 777600
M377, 777400
M777, 777000
M1777, 776000
M3777, 774000
M7777, 772000
M17777, 760000
M37777, 740000
M77777, 700000
K600K, 600000
K777K, 777000
K5, 5
K11, 11
K21, 21
K41, 41
K101, 101
K201, 201
K401, 401
K1001, 1001

K2001, 2021
K4001, 4001
K10001, 10001
KHALT, 740040
KCAL0, 17760
K2021, 2021
K2120, 2120
KCALE, 617760
KSKP, SKP
KCLA, CLA
K5253, 525253
K60K, 60000
K6625, 625253
K615, 615253
COUNT, 77777

START