

IDENTIFICATION

PRODUCT CODE: MAINDEC-11-DCKBL-A1-D
PRODUCT NAME: DIV INSTRUCTION TEST
DATE CREATED: 15 MAR 1972
MAINTAINER: DIAGNOSTIC GROUP
AUTHOR: BOB BRAIN

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1,0 ABSTRACT

THIS PROGRAM WILL INCREMENTLY TEST AND ISOLATE SIMPLE MALFUNCTION RELATED TO THE DIV INSTRUCTION

2,0 REQUIREMENTS

2,1 EQUIPMENT

BASIC 11/45 SYSTEM OR
11/40 WITH KE11-E OPTION

2,2 STORAGE

THIS PROGRAM USES 0 THRU 17500

2,3 PRELIMINARY PROGRAMS

D0AA THRU D0MA

3,0 LOADING PROCEDURE

LOAD PROGRAM USING ABS LOADER

4,0 STARTING PROCEDURE

LOAD ADDRESS 200, PRESS START, THE PROGRAM WILL LOOP AND RING BELL ON PASS COMPLETION,

5,0 OPERATING PROCEDURE

5,1 SWITCH SETTINGS

NONE

5,2 SUBROUTINE ABSTRACTS

5,2,1 SCOPE

SCOPE IS A MOVE PC,R1 AND STORES THE PC+2 IN R1,

5,2,2 HLT

HLT IS A HALT INSTRUCTION,

6,0 ERRORS

ALL ERRORS WILL CAUSE A HALT
TRAP AND INTERRUPT ERRORS WILL CAUSE A HALT AT VECTOR+2,

6,1 ERROR RECOVERY

PRESS CONTINUE TO PROCEED TO NEXT TEST

6,2 ERROR LOOPING

TO LOOP ON AN ERROR, PLACE A BRANCH TO THE PREVIOUS SCOPE INSTRUCTION IN PLACE OF THE HALT INSTRUCTION,
NOTE THAT IF THE ERROR IS INTERMITTANT THAT THE TEST WILL DROP THRU THE HALT AND PROCEED TO THE NEXT TEST,
THEREFORE, TO LOOP THE TEST CONTINUOUSLY REPLACE THE BEQ ;+4 INSTRUCTION IMMEDIATLY PRECEEDING THE HALT WITH A BRANCH BACK TO THE PREVIOUS SCOPE,

TO LOOP ON TRAP FAILURES, PATCH IN THE FOLLOWING ROUTINE AT THE ADDRESS OF THE TRAP VECTOR,

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TRAPVEC:      TRAPVEC+4
TRAPVEC+2:    0
TRAPVEC+4:    012716 ;MOVE SCOPE ADDRESS TO STACK
TRAPVEC+6:    ADDRESS ;ADDRESS OF PREVIOUS SCOPE
TRAPVEC+10:   000006 ;RETURN TO TEST AT SCOPE

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RESTORE ALL LOCATIONS BEFORE PROCEEDING TO NEXT TEST.

7,0

RESTRICTIONS
NONE

8,0

MISCELLANEOUS
ON TRAP ERRORS THE STACK POINTER(R6) WILL CONTAIN THE
ADDRESS WHERE THE TRAP OCCURED;

8,1

EXECUTION TIME
THE PROGRAM TAKES ABOUT 1 MINUTE.

8,2

STACK_POINTER
THE PROGRAM INITIALLY SETS THE STACK POINTER AT 500.

9,0

PROGRAM DESCRIPTION
THIS IS A TEST OF THE DIV INSTRUCTION, IT TESTS DIV ON
DIFERENT NUMBER PATERNS IN ALL EVEN REGISTERS, ERROR
CONDITIONS ARE ALSO CHECKED

 ITEST 3 DIV -1 -4 / #2 = -2 REM = 0 PS = 10

001202	010701			SCOPE		I TEST OF DIVIDE
001204	012700	177777		MOV	#-1,X0	I LOAD HIGH ORDER WITH -1
001210	012701	177774		MOV	#-4,X0+1	I LOAD LOW ORDER WITH -4
001214	071027	000022		DIV	#2,X0	I DIVIDE BY #2
001220	013707	177776	010374	MOV	##PS,PSW	I SAVE PS
001226	122707	000010	010366	CMPB	#10,PSW	I IS PS = 10
001234	001401			BEQ	+.4	
001236	000000			HLT		I PS IS WRONG
001240	022700	177776		CMP	#-2,X0	I IS QUOTIENT = -2
001244	001401			BEQ	+.4	
001246	000000			HLT		I QUOTIENT IS WRONG
001250	022701	000020		CMP	#0,X0+1	I IS REMAINDER = 0
001254	001401			BEQ	+.4	
001256	000000			HLT		I REMAINDER IS WRONG

 ITEST 4 DIV -1 -9 / #3 = -3 REM = 0 PS = 10

001260	010701			SCOPE		I TEST OF DIVIDE
001262	012700	177777		MOV	#-1,X0	I LOAD HIGH ORDER WITH -1
001266	012701	177767		MOV	#-9,X0+1	I LOAD LOW ORDER WITH -9,
001272	071027	000023		DIV	#3,X0	I DIVIDE BY #3
001276	013707	177776	010316	MOV	##PS,PSW	I SAVE PS
001304	122707	000010	010310	CMPB	#10,PSW	I IS PS = 10
001312	001401			BEQ	+.4	
001314	000000			HLT		I PS IS WRONG
001316	022700	177775		CMP	#-3,X0	I IS QUOTIENT = -3
001322	001401			BEQ	+.4	
001324	000000			HLT		I QUOTIENT IS WRONG
001326	022701	000020		CMP	#0,X0+1	I IS REMAINDER = 0
001332	001401			BEQ	+.4	
001334	000000			HLT		I REMAINDER IS WRONG

 ITEST 5 DIV 0 9 / #2 = 4 REM = 1 PS = 0

001336	010701			SCOPE		I TEST OF DIVIDE
001340	012700	000020		MOV	#0,X0	I LOAD HIGH ORDER WITH 0
001344	012701	000011		MOV	#9,X0+1	I LOAD LOW ORDER WITH 9,
001350	071027	000022		DIV	#2,X0	I DIVIDE BY #2
001354	013707	177776	010240	MOV	##PS,PSW	I SAVE PS
001362	122707	000020	010232	CMPB	#0,PSW	I IS PS = 0
001370	001401			BEQ	+.4	
001372	000000			HLT		I PS IS WRONG
001374	022700	000024		CMP	#4,X0	I IS QUOTIENT = 4
001400	001401			BEQ	+.4	
001402	000000			HLT		I QUOTIENT IS WRONG
001404	022701	000021		CMP	#1,X0+1	I IS REMAINDER = 1
001410	001401			BEQ	+.4	
001412	000000			HLT		I REMAINDER IS WRONG

 ITEST 6 DIV -1 -9 / #2 = -4 REM = -1 PS = 10

001414	010701			SCOPE		I TEST OF DIVIDE
001416	012700	177777		MOV	#-1,X0	I LOAD HIGH ORDER WITH -1
001422	012701	177767		MOV	#-9,X0+1	I LOAD LOW ORDER WITH -9,
001426	071027	000022		DIV	#2,X0	I DIVIDE BY #2
001432	013707	177776	010162	MOV	##PS,PSW	I SAVE PS
001440	122707	000010	010154	CMPB	#10,PSW	I IS PS = 10
001446	001401			BEQ	+.4	
001450	000000			HLT		I PS IS WRONG
001452	022700	177774		CMP	#-4,X0	I IS QUOTIENT = -4
001456	001401			BEQ	+.4	
001460	000000			HLT		I QUOTIENT IS WRONG
001462	022701	177777		CMP	#-1,X0+1	I IS REMAINDER = -1
001466	001401			BEQ	+.4	
001470	000000			HLT		I REMAINDER IS WRONG

 ;TEST 7 DIV 0 9, / #2 = -4 REM = 1 PS = 10
 ;*****

001472	010701			SCOPE		TEST OF DIVIDE
001474	012700	000000		MOV	#0,%0	ILOAD HIGH ORDER WITH 0
001500	012701	000011		MOV	#9,%0+1	ILOAD LOW ORDER WITH 9.
001504	071027	177776		DIV	#-2,%0	IDIVIDE BY #-2
001510	013767	177776	010104	MOV	#PS,PSW	ISAVE PS
001516	122767	000010	010076	CMPS	#10,PSW	IPS PS = 10
001524	001401			BEQ	,+4	
001526	000000			HLT		IPS IS WRONG
001530	022700	177774		CMPS	#-4,%0	IPS QUOTIENT = -4
001534	001401			BEQ	,+4	
001536	000000			HLT		IQUOTIENT IS WRONG
001540	022701	000001		CMPS	#1,%0+1	IPS REMAINDER = 1
001544	001401			BEQ	,+4	
001546	000000			HLT		IREMAINDER IS WRONG

 ;TEST 10 DIV 0 2 / #3 = 0 REM = 2 PS = 4
 ;*****

001550	010701			SCOPE		TEST OF DIVIDE
001552	012700	000000		MOV	#0,%0	ILOAD HIGH ORDER WITH 0
001556	012701	000002		MOV	#2,%0+1	ILOAD LOW ORDER WITH 2
001562	071027	000003		DIV	#3,%0	IDIVIDE BY #3
001566	013767	177776	010026	MOV	#PS,PSW	ISAVE PS
001574	122767	000004	010020	CMPS	#4,PSW	IPS PS = 4
001602	001401			BEQ	,+4	
001604	000000			HLT		IPS IS WRONG
001606	022700	000000		CMPS	#0,%0	IPS QUOTIENT = 0
001612	001401			BEQ	,+4	
001614	000000			HLT		IQUOTIENT IS WRONG
001616	022701	000002		CMPS	#2,%0+1	IPS REMAINDER = 2
001622	001401			BEQ	,+4	
001624	000000			HLT		IREMAINDER IS WRONG

 ;TEST 11 DIV 0 2 / #3 = 0 REM = 2 PS = 4
 ;*****

001626	010701			SCOPE		TEST OF DIVIDE
001630	012700	000000		MOV	#0,%0	ILOAD HIGH ORDER WITH 0
001634	012701	000002		MOV	#2,%0+1	ILOAD LOW ORDER WITH 2
001640	071027	177775		DIV	#-3,%0	IDIVIDE BY #-3
001644	013767	177776	007750	MOV	#PS,PSW	ISAVE PS
001652	122767	000004	007742	CMPS	#4,PSW	IPS PS = 4
001660	001401			BEQ	,+4	
001662	000000			HLT		IPS IS WRONG
001664	022700	000000		CMPS	#0,%0	IPS QUOTIENT = 0
001670	001401			BEQ	,+4	
001672	000000			HLT		IQUOTIENT IS WRONG
001674	022701	000002		CMPS	#2,%0+1	IPS REMAINDER = 2
001700	001401			BEQ	,+4	
001702	000000			HLT		IREMAINDER IS WRONG

 ;TEST 12 DIV -1 -2 / #3 = 0 REM = -2 PS = 4
 ;*****

001704	010701			SCOPE		TEST OF DIVIDE
001706	012700	177777		MOV	#-1,%0	ILOAD HIGH ORDER WITH -1
001712	012701	177776		MOV	#-2,%0+1	ILOAD LOW ORDER WITH -2
001716	071027	000003		DIV	#3,%0	IDIVIDE BY #3
001722	013767	177776	007672	MOV	#PS,PSW	ISAVE PS
001730	122767	000004	007664	CMPS	#4,PSW	IPS PS = 4
001736	001401			BEQ	,+4	
001740	000000			HLT		IPS IS WRONG
001742	022700	000000		CMPS	#0,%0	IPS QUOTIENT = 0
001746	001401			BEQ	,+4	
001750	000000			HLT		IQUOTIENT IS WRONG
001752	022701	177776		CMPS	#-2,%0+1	IPS REMAINDER = -2
001756	001401			BEQ	,+4	
001760	000000			HLT		IREMAINDER IS WRONG

 ITEST 13 Div -1 -1 / #1 = -1 REM = 0 PS = 10

001762	010701			SCOPE		ITEST OF DIVIDE
001764	012700	177777		MOV	#-1,%0	ILOAD HIGH ORDER WITH -1
001770	012701	177777		MOV	#-1,%0+1	ILOAD LOW ORDER WITH -1
001774	071027	000001		DIV	#1,%0	IDIVIDE BY #1
002000	013767	177776	007614	MOV	##PS,PSW	ISAVE PS
002006	122767	000010	007606	CHPB	#10,PSW	IIS PS = 10
002014	001401			BEQ	,+4	
002016	000000			HLT		IJS IS WRONG
002020	022700	177777		CHP	#-1,%0	IIS QUOTIENT = -1
002024	001401			BEQ	,+4	
002026	000000			HLT		IQUOTIENT IS WRONG
002030	022701	000000		CHP	#0,%0+1	IIS REMAINDER = 0
002034	001401			BEQ	,+4	
002036	000000			HLT		IREMAINDER IS WRONG

 ITEST 14 Div 0 0 / #1 = 0 REM = 0 PS = 4

002040	010701			SCOPE		ITEST OF DIVIDE
002042	012700	000000		MOV	#0,%0	ILOAD HIGH ORDER WITH 0
002046	012701	000000		MOV	#0,%0+1	ILOAD LOW ORDER WITH 0
002052	071027	000001		DIV	#1,%0	IDIVIDE BY #1
002056	013767	177776	007536	MOV	##PS,PSW	ISAVE PS
002064	122767	000004	007530	CHPB	#4,PSW	IIS PS = 4
002072	001401			BEQ	,+4	
002074	000000			HLT		IJS IS WRONG
002076	022700	000000		CHP	#0,%0	IIS QUOTIENT = 0
002102	001401			BEQ	,+4	
002104	000000			HLT		IQUOTIENT IS WRONG
002106	022701	000000		CHP	#0,%0+1	IIS REMAINDER = 0
002112	001401			BEQ	,+4	
002114	000000			HLT		IREMAINDER IS WRONG

 ITEST 15 Div -1 125252 / #2 = 152525 REM = 0 PS = 10

002116	010701			SCOPE		ITEST OF DIVIDE
002120	012700	177777		MOV	#-1,%0	ILOAD HIGH ORDER WITH -1
002124	012701	125252		MOV	#125252,%0+1	ILOAD LOW ORDER WITH 125252
002130	071027	000002		DIV	#2,%0	IDIVIDE BY #2
002134	013767	177776	007460	MOV	##PS,PSW	ISAVE PS
002142	122767	000010	007452	CHPB	#10,PSW	IIS PS = 10
002150	001401			BEQ	,+4	
002152	000000			HLT		IJS IS WRONG
002154	022700	152525		CHP	#152525,%0	IIS QUOTIENT = 152525
002160	001401			BEQ	,+4	
002162	000000			HLT		IQUOTIENT IS WRONG
002164	022701	000000		CHP	#0,%0+1	IIS REMAINDER = 0
002170	001401			BEQ	,+4	
002172	000000			HLT		IREMAINDER IS WRONG

 ITEST 16 Div 0 52525 / #2 = 25252 REM = 1 PS = 0

002174	010701			SCOPE		ITEST OF DIVIDE
002176	012700	000000		MOV	#0,%0	ILOAD HIGH ORDER WITH 0
002202	012701	052525		MOV	#52525,%0+1	ILOAD LOW ORDER WITH 52525
002206	071027	000002		DIV	#2,%0	IDIVIDE BY #2
002212	013767	177776	007402	MOV	##PS,PSW	ISAVE PS
002220	122767	000000	007374	CHPB	#0,PSW	IIS PS = 0
002226	001401			BEQ	,+4	
002230	000000			HLT		IJS IS WRONG
002232	022700	025252		CHP	#25252,%0	IIS QUOTIENT = 25252
002236	001401			BEQ	,+4	
002240	000000			HLT		IQUOTIENT IS WRONG
002242	022701	000001		CHP	#1,%0+1	IIS REMAINDER = 1
002246	001401			BEQ	,+4	
002250	000000			HLT		IREMAINDER IS WRONG

 TEST 17 Div -1 =1 / #-1 = 1 REM = 0 PS = 0

002252	010701			SCOPE		ITEST OF DIVIDE
002254	012700	177777		MOV	#-1,%0	ILOAD HIGH ORDER WITH -1
002260	012701	177777		MOV	#-1,%0+1	ILOAD LOW ORDER WITH -1
002264	071027	177777		DIV	#-1,%0	IDIVIDE BY #-1
002270	013767	177776	007324	MOV	@#PS,PSH	ISAVE PS
002276	122767	000000	007316	CMPB	#0,PSH	IIS PS = 0
002304	001401			BEQ	,+4	
002306	000000			HLT		IIS IS WRONG
002310	022700	000001		CMP	#1,%0	IIS QUOTIENT = 1
002314	001401			BEQ	,+4	
002316	000000			HLT		IQUOTIENT IS WRONG
002320	022701	000000		CMP	#0,%0+1	IIS REMAINDER = 0
002324	001401			BEQ	,+4	
002326	000000			HLT		IREMAINDER IS WRONG

 TEST 20 Div 25253 0 / #125252 = 100000 REM = 0 PS = 10

002330	010701			SCOPE		ITEST OF DIVIDE
002332	012700	025253		MOV	#25253,%0	ILOAD HIGH ORDER WITH 25253
002336	012701	000000		MOV	#0,%0+1	ILOAD LOW ORDER WITH 0
002342	071027	125252		DIV	#125252,%0	IDIVIDE BY #125252
002346	013767	177776	007246	MOV	@#PS,PSH	ISAVE PS
002354	122767	000010	007240	CMPB	#10,PSH	IIS PS = 10
002362	001401			BEQ	,+4	
002364	000000			HLT		IIS IS WRONG
002366	022700	100000		CMP	#100000,%0	IIS QUOTIENT = 100000
002372	001401			BEQ	,+4	
002374	000000			HLT		IQUOTIENT IS WRONG
002376	022701	000000		CMP	#0,%0+1	IIS REMAINDER = 0
002402	001401			BEQ	,+4	
002404	000000			HLT		IREMAINDER IS WRONG

 TEST 21 Div 25253 1 / #125252 = 100000 REM = 1 PS = 10

002406	010701			SCOPE		ITEST OF DIVIDE
002410	012700	025253		MOV	#25253,%0	ILOAD HIGH ORDER WITH 25253
002414	012701	000001		MOV	#1,%0+1	ILOAD LOW ORDER WITH 1
002420	071027	125252		DIV	#125252,%0	IDIVIDE BY #125252
002424	013767	177776	007170	MOV	@#PS,PSH	ISAVE PS
002432	122767	000010	007162	CMPB	#10,PSH	IIS PS = 10
002440	001401			BEQ	,+4	
002442	000000			HLT		IIS IS WRONG
002444	022700	100000		CMP	#100000,%0	IIS QUOTIENT = 100000
002450	001401			BEQ	,+4	
002452	000000			HLT		IQUOTIENT IS WRONG
002454	022701	000001		CMP	#1,%0+1	IIS REMAINDER = 1
002460	001401			BEQ	,+4	
002462	000000			HLT		IREMAINDER IS WRONG

 TEST 22 Div 37777 77777 / #77777 = 77777 REM = 77776 PS = 0

002464	010701			SCOPE		ITEST OF DIVIDE
002466	012700	037777		MOV	#37777,%0	ILOAD HIGH ORDER WITH 37777
002472	012701	077777		MOV	#77777,%0+1	ILOAD LOW ORDER WITH 77777
002476	071027	077777		DIV	#77777,%0	IDIVIDE BY #77777
002502	013767	177776	007112	MOV	@#PS,PSH	ISAVE PS
002510	122767	000000	007104	CMPB	#0,PSH	IIS PS = 0
002516	001401			BEQ	,+4	
002520	000000			HLT		IIS IS WRONG
002522	022700	077777		CMP	#77777,%0	IIS QUOTIENT = 77777
002526	001401			BEQ	,+4	
002530	000000			HLT		IQUOTIENT IS WRONG
002532	022701	077776		CMP	#77776,%0+1	IIS REMAINDER = 77776
002536	001401			BEQ	,+4	
002540	000000			HLT		IREMAINDER IS WRONG

 ITEST 23 DIV 0 10000 / #2 = 40000 REM = 0 PS = 0

002542	010701		SCOPE		ITEST OF DIVIDE
002544	012700	000000	MOV	#0,%0	ILOAD HIGH ORDER WITH 0
002550	012701	100000	MOV	#100000,%0+1	ILOAD LOW ORDER WITH 100000
002594	071027	000032	DIV	#2,%0	IDIVIDE BY #2
002560	013767	177776	MOV	##PS,PSW	ISAVE PS
002566	122767	000000	CHPB	#0,PSW	IIS PS = 0
002574	001401		BEQ	,+4	
002576	000000		HLT		IPS IS WRONG
002600	022700	040000	CHP	#40000,%0	IIS QUOTIENT = 40000
002604	001401		BEQ	,+4	
002606	000000		HLT		IQUOTIENT IS WRONG
002610	022701	000000	CHP	#0,%0+1	IIS REMAINDER = 0
002614	001401		BEQ	,+4	
002616	000000		HLT		IREMAINDER IS WRONG

 ITEST 24 DIV 0 100001 / #2 = 40000 REM = 1 PS = 0

002620	010701		SCOPE		ITEST OF DIVIDE
002622	012700	000000	MOV	#0,%0	ILOAD HIGH ORDER WITH 0
002626	012701	100001	MOV	#100001,%0+1	ILOAD LOW ORDER WITH 100001
002632	071027	000032	DIV	#2,%0	IDIVIDE BY #2
002636	013767	177776	MOV	##PS,PSW	ISAVE PS
002644	122767	000000	CHPB	#0,PSW	IIS PS = 0
002652	001401		BEQ	,+4	
002654	000000		HLT		IPS IS WRONG
002656	022700	040000	CHP	#40000,%0	IIS QUOTIENT = 40000
002662	001401		BEQ	,+4	
002664	000000		HLT		IQUOTIENT IS WRONG
002666	022701	000001	CHP	#1,%0+1	IIS REMAINDER = 1
002672	001401		BEQ	,+4	
002674	000000		HLT		IREMAINDER IS WRONG

 ITEST 25 DIV 20000 37776 / #77777 = 40000 REM = 77776 PS = 0

002676	010701		SCOPE		ITEST OF DIVIDE
002700	012700	020000	MOV	#20000,%0	ILOAD HIGH ORDER WITH 20000
002704	012701	037776	MOV	#37776,%0+1	ILOAD LOW ORDER WITH 37776
002710	071027	077777	DIV	#77777,%0	IDIVIDE BY #77777
002714	013767	177776	MOV	##PS,PSW	ISAVE PS
002722	122767	000000	CHPB	#0,PSW	IIS PS = 0
002730	001401		BEQ	,+4	
002732	000000		HLT		IPS IS WRONG
002734	022700	040000	CHP	#40000,%0	IIS QUOTIENT = 40000
002740	001401		BEQ	,+4	
002742	000000		HLT		IQUOTIENT IS WRONG
002744	022701	077776	CHP	#77776,%0+1	IIS REMAINDER = 77776
002750	001401		BEQ	,+4	
002752	000000		HLT		IREMAINDER IS WRONG

 ITEST 26 DIV 177777 77777 / #177776 = 40000 REM = 177777 PS = 0

002754	010701		SCOPE		ITEST OF DIVIDE
002756	012700	177777	MOV	#177777,%0	ILOAD HIGH ORDER WITH 177777
002762	012701	077777	MOV	#77777,%0+1	ILOAD LOW ORDER WITH 77777
002766	071027	177776	DIV	#177776,%0	IDIVIDE BY #177776
002772	013767	177776	MOV	##PS,PSW	ISAVE PS
003000	122767	000000	CHPB	#0,PSW	IIS PS = 0
003006	001401		BEQ	,+4	
003010	000000		HLT		IPS IS WRONG
003012	022700	040000	CHP	#40000,%0	IIS QUOTIENT = 40000
003016	001401		BEQ	,+4	
003020	000000		HLT		IQUOTIENT IS WRONG
003022	022701	177777	CHP	#177777,%0+1	IIS REMAINDER = 177777
003026	001401		BEQ	,+4	
003030	000000		HLT		IREMAINDER IS WRONG

 ITEST 27 Div 15777 100001 / #100000 = 40000 REM = 100001 PS = 0

003032	012701			SCOPE		ITEST OF DIVIDE
003034	012700	15777		MOV	#15777,%0	ILOAD HIGH ORDER WITH 15777
003040	012701	100001		MOV	#100001,%0+1	ILOAD LOW ORDER WITH 100001
003044	011027	100000		DIV	#100000,%0	IDIVIDE BY #100000
003050	013767	17776	006544	MOV	##PS,PSW	ISAVE PS
003056	122767	000000	006536	CHPB	#0,PSW	IIS PS = 0
003064	001401			BEQ	,+4	
003066	000000			HLT		IIS IS WRONG
003070	022700	040000		CHP	#40000,%0	IIS QUOTIENT = 40000
003074	001401			BEQ	,+4	
003076	000000			HLT		IQUOTIENT IS WRONG
003100	022701	100001		CHP	#100001,%0+1	IIS REMAINDER = 100001
003104	001401			BEQ	,+4	
003106	000000			HLT		IREMAINDER IS WRONG

 ITEST 30 Div 0 52525 / #52525 = 1 REM = 0 PS = 0

003110	012701			SCOPE		ITEST OF DIVIDE
003112	012700	000000		MOV	#0,%0	ILOAD HIGH ORDER WITH 0
003116	012701	052525		MOV	#52525,%0+1	ILOAD LOW ORDER WITH 52525
003122	011027	052525		DIV	#52525,%0	IDIVIDE BY #52525
003126	013767	17776	006466	MOV	##PS,PSW	ISAVE PS
003134	122767	000000	006460	CHPB	#0,PSW	IIS PS = 0
003142	001401			BEQ	,+4	
003144	000000			HLT		IIS IS WRONG
003146	022700	000001		CHP	#1,%0	IIS QUOTIENT = 1
003152	001401			BEQ	,+4	
003154	000000			HLT		IQUOTIENT IS WRONG
003156	022701	000000		CHP	#0,%0+1	IIS REMAINDER = 0
003162	001401			BEQ	,+4	
003164	000000			HLT		IREMAINDER IS WRONG

 ITEST 31 Div 0 52524 / #52525 = 0 REM = 52524 PS = 4

003166	012701			SCOPE		ITEST OF DIVIDE
003170	012700	000000		MOV	#0,%0	ILOAD HIGH ORDER WITH 0
003174	012701	052524		MOV	#52524,%0+1	ILOAD LOW ORDER WITH 52524
003200	011027	052525		DIV	#52525,%0	IDIVIDE BY #52525
003204	013767	17776	006410	MOV	##PS,PSW	ISAVE PS
003212	122767	000004	006402	CHPB	#4,PSW	IIS PS = 4
003220	001401			BEQ	,+4	
003222	000000			HLT		IIS IS WRONG
003224	022700	000000		CHP	#0,%0	IIS QUOTIENT = 0
003230	001401			BEQ	,+4	
003232	000000			HLT		IQUOTIENT IS WRONG
003234	022701	052524		CHP	#52524,%0+1	IIS REMAINDER = 52524
003240	001401			BEQ	,+4	
003242	000000			HLT		IREMAINDER IS WRONG

 ITEST 32 Div 0 0 / #125252 = 0 REM = 0 PS = 4

003244	012701			SCOPE		ITEST OF DIVIDE
003246	012700	000000		MOV	#0,%0	ILOAD HIGH ORDER WITH 0
003252	012701	000000		MOV	#0,%0+1	ILOAD LOW ORDER WITH 0
003256	011027	125252		DIV	#125252,%0	IDIVIDE BY #125252
003262	013767	17776	006332	MOV	##PS,PSW	ISAVE PS
003270	122767	000004	006324	CHPB	#4,PSW	IIS PS = 4
003276	001401			BEQ	,+4	
003300	000000			HLT		IIS IS WRONG
003302	022700	000000		CHP	#0,%0	IIS QUOTIENT = 0
003306	001401			BEQ	,+4	
003310	000000			HLT		IQUOTIENT IS WRONG
003312	022701	000000		CHP	#0,%0+1	IIS REMAINDER = 0
003316	001401			BEQ	,+4	
003320	000000			HLT		IREMAINDER IS WRONG

 TEST 33 Div 177614 66560 / #40342 = 177070 REM = 0 PS = 10

003322	010701			SCOPE		TEST OF DIVIDE
003324	012700	177614		MOV	#177614,X0	LOAD HIGH ORDER WITH 177614
003330	012701	066560		MOV	#66560,X0+1	LOAD LOW ORDER WITH 66560
003334	071027	040342		DIV	#40342,X0	DIVIDE BY #40342
003340	013767	177776	006254	MOV	#PS,PSW	SAVE PS
003346	122767	000010	006246	CMPB	#10,PSW	IS PS = 10
003354	001401			BEQ	,+4	
003356	000000			HLT		PS IS WRONG
003360	022700	177070		CMP	#177070,X0	IS QUOTIENT = 177070
003364	001401			BEQ	,+4	
003366	000000			HLT		QUOTIENT IS WRONG
003370	022701	000000		CMP	#0,X0+1	IS REMAINDER = 0
003374	001401			BEQ	,+4	
003376	000000			HLT		REMAINDER IS WRONG

 TEST 34 Div 0 77777 / #0 = DUMMY REM = DUMMY PS = 3

003400	010701			SCOPE		TEST OF DIVIDE
003402	012700	000000		MOV	#0,X0	LOAD HIGH ORDER WITH 0
003406	012701	077777		MOV	#77777,X0+1	LOAD LOW ORDER WITH 77777
003412	071027	000000		DIV	#0,X0	DIVIDE BY #0
003416	013767	177776	006176	MOV	#PS,PSW	SAVE PS
003424	042767	000014	006170	BIC	#14,PSW	
003432	122767	000003	006162	CMPB	#3,PSW	IS PS = 3
003440	001401			BEQ	,+4	
003442	000000			HLT		PS IS WRONG

 TEST 35 Div 77777 177777 / #2 = DUMMY REM = DUMMY PS = 2

003444	010701			SCOPE		TEST OF DIVIDE
003446	012700	077777		MOV	#77777,X0	LOAD HIGH ORDER WITH 77777
003492	012701	177777		MOV	#177777,X0+1	LOAD LOW ORDER WITH 177777
003456	071027	000002		DIV	#2,X0	DIVIDE BY #2
003462	013767	177776	006132	MOV	#PS,PSW	SAVE PS
003470	042767	000014	006124	BIC	#14,PSW	
003476	122767	000002	006116	CMPB	#2,PSW	IS PS = 2
003504	001401			BEQ	,+4	
003506	000000			HLT		PS IS WRONG

 TEST 36 Div 0 4 / #2 = 2 REM = 0 PS = 0

003510	010701			SCOPE		TEST OF DIVIDE
003512	012702	000000		MOV	#0,X2	LOAD HIGH ORDER WITH 0
003516	012703	000004		MOV	#4,X2+1	LOAD LOW ORDER WITH 4
003522	071227	000002		DIV	#2,X2	DIVIDE BY #2
003526	013767	177776	006066	MOV	#PS,PSW	SAVE PS
003534	122767	000000	006060	CMPB	#0,PSW	IS PS = 0
003542	001401			BEQ	,+4	
003544	000000			HLT		PS IS WRONG
003546	022702	000002		CMP	#2,X2	IS QUOTIENT = 2
003552	001401			BEQ	,+4	
003554	000000			HLT		QUOTIENT IS WRONG
003556	022703	000000		CMP	#0,X2+1	IS REMAINDER = 0
003562	001401			BEQ	,+4	
003564	000000			HLT		REMAINDER IS WRONG

 ITEST 37 DIV 0 9 / #3 = 3 REM = 0 PS = 0

003566	012701			SCOPE		ITEST OF DIVIDE
003570	012702	000020		MOV	#0,%2	ILOAD HIGH ORDER WITH 0
003574	012703	000011		MOV	#9,%2+1	ILOAD LOW ORDER WITH 9.
003600	071227	000023		DIV	#3,%2	IDIVIDE BY #3
003604	013767	177776	006010	MOV	@#PS,PSW	ISAVE PS
003612	122707	000020	006002	CHPB	#0,PSW	IIS PS = 0
003620	001401			BEQ	,+4	
003622	000000			HLT		IPS IS WRONG
003624	022702	000023		CHP	#3,%2	IIS QUOTIENT = 3
003630	001401			BEQ	,+4	
003632	000000			HLT		IQUOTIENT IS WRONG
003634	022703	000020		CHP	#0,%2+1	IIS REMAINDER = 0
003640	001401			BEQ	,+4	
003642	000000			HLT		IREMAINDER IS WRONG

 ITEST 40 DIV -1 =4 / #2 = -2 REM = 0 PS = 10

003644	010701			SCOPE		ITEST OF DIVIDE
003646	012702	177777		MOV	#-1,%2	ILOAD HIGH ORDER WITH -1
003652	012703	177774		MOV	#-4,%2+1	ILOAD LOW ORDER WITH -4
003656	071227	000022		DIV	#2,%2	IDIVIDE BY #2
003662	013767	177776	005732	MOV	@#PS,PSW	ISAVE PS
003670	122707	000010	005724	CHPB	#10,PSW	IIS PS = 10
003676	001401			BEQ	,+4	
003700	000000			HLT		IPS IS WRONG
003702	022702	177776		CHP	#-2,%2	IIS QUOTIENT = -2
003706	001401			BEQ	,+4	
003710	000000			HLT		IQUOTIENT IS WRONG
003712	022703	000020		CHP	#0,%2+1	IIS REMAINDER = 0
003716	001401			BEQ	,+4	
003720	000000			HLT		IREMAINDER IS WRONG

 ITEST 41 DIV -1 =9 / #3 = -3 REM = 0 PS = 10

003722	010701			SCOPE		ITEST OF DIVIDE
003724	012702	177777		MOV	#-1,%2	ILOAD HIGH ORDER WITH -1
003730	012703	177767		MOV	#-9,%2+1	ILOAD LOW ORDER WITH -9.
003734	071227	000023		DIV	#3,%2	IDIVIDE BY #3
003740	013767	177776	005654	MOV	@#PS,PSW	ISAVE PS
003746	122707	000010	005646	CHPB	#10,PSW	IIS PS = 10
003754	001401			BEQ	,+4	
003756	000000			HLT		IPS IS WRONG
003760	022702	177775		CHP	#-3,%2	IIS QUOTIENT = -3
003764	001401			BEQ	,+4	
003766	000000			HLT		IQUOTIENT IS WRONG
003770	022703	000020		CHP	#0,%2+1	IIS REMAINDER = 0
003774	001401			BEQ	,+4	
003776	000000			HLT		IREMAINDER IS WRONG

 ITEST 42 DIV 0 9 / #2 = 4 REM = 1 PS = 0

004000	010701			SCOPE		ITEST OF DIVIDE
004002	012702	000020		MOV	#0,%2	ILOAD HIGH ORDER WITH 0
004006	012703	000011		MOV	#9,%2+1	ILOAD LOW ORDER WITH 9.
004012	071227	000022		DIV	#2,%2	IDIVIDE BY #2
004016	013767	177776	005576	MOV	@#PS,PSW	ISAVE PS
004024	122707	000020	005570	CHPB	#0,PSW	IIS PS = 0
004032	001401			BEQ	,+4	
004034	000000			HLT		IPS IS WRONG
004036	022702	000024		CHP	#4,%2	IIS QUOTIENT = 4
004042	001401			BEQ	,+4	
004044	000000			HLT		IQUOTIENT IS WRONG
004046	022703	000021		CHP	#1,%2+1	IIS REMAINDER = 1
004052	001401			BEQ	,+4	
004054	000000			HLT		IREMAINDER IS WRONG

 ITEST 43 Div =1 *9 / #2 = -4 REM = -1 PS = 10

004056	010701			SCOPE		ITEST OF DIVIDE
004060	012702	17777		MOV	#-1,X2	ILOAD HIGH ORDER WITH -1
004064	012703	17776		MOV	#-9,X2+1	ILOAD LOW ORDER WITH -9,
004070	071227	000032		DIV	#2,X2	IDIVIDE BY #2
004074	013767	177776	005520	MOV	#PS,PSW	ISAVE PS
004102	122767	000010	005512	CHPB	#10,PSW	IIS PS = 10
004110	001401			BEQ	,+4	
004112	000000			HLT		IJS IS WRONG
004114	022702	177774		CHP	#-4,X2	IIS QUOTIENT = -4
004120	001401			BEQ	,+4	
004122	000000			HLT		IQUOTIENT IS WRONG
004124	022703	177777		CHP	#-1,X2+1	IIS REMAINDER = -1
004130	001401			BEQ	,+4	
004132	000000			HLT		IREMAINDER IS WRONG

 ITEST 44 Div 0 9 / #2 = -4 REM = 1 PS = 10

004134	010701			SCOPE		ITEST OF DIVIDE
004136	012702	000000		MOV	#0,X2	ILOAD HIGH ORDER WITH 0
004142	012703	000011		MOV	#9,X2+1	ILOAD LOW ORDER WITH 9,
004146	071227	177776		DIV	#-2,X2	IDIVIDE BY #-2
004152	013767	177776	005442	MOV	#PS,PSW	ISAVE PS
004160	122767	000010	005434	CHPB	#10,PSW	IIS PS = 10
004166	001401			BEQ	,+4	
004170	000000			HLT		IJS IS WRONG
004172	022702	177774		CHP	#-4,X2	IIS QUOTIENT = -4
004176	001401			BEQ	,+4	
004200	000000			HLT		IQUOTIENT IS WRONG
004202	022703	000031		CHP	#1,X2+1	IIS REMAINDER = 1
004206	001401			BEQ	,+4	
004210	000000			HLT		IREMAINDER IS WRONG

 ITEST 45 Div 0 2 / #3 = 0 REM = 2 PS = 4

004212	010701			SCOPE		ITEST OF DIVIDE
004214	012702	000000		MOV	#0,X2	ILOAD HIGH ORDER WITH 0
004220	012703	000022		MOV	#2,X2+1	ILOAD LOW ORDER WITH 2
004224	071227	000033		DIV	#3,X2	IDIVIDE BY #3
004230	013767	177776	005364	MOV	#PS,PSW	ISAVE PS
004236	122767	000024	005356	CHPB	#4,PSW	IIS PS = 4
004244	001401			BEQ	,+4	
004246	000000			HLT		IJS IS WRONG
004250	022702	000020		CHP	#0,X2	IIS QUOTIENT = 0
004254	001401			BEQ	,+4	
004256	000000			HLT		IQUOTIENT IS WRONG
004260	022703	000032		CHP	#2,X2+1	IIS REMAINDER = 2
004264	001401			BEQ	,+4	
004266	000000			HLT		IREMAINDER IS WRONG

 ITEST 46 Div 0 2 / #3 = 0 REM = 2 PS = 4

004270	010701			SCOPE		ITEST OF DIVIDE
004272	012702	000000		MOV	#0,X2	ILOAD HIGH ORDER WITH 0
004276	012703	000032		MOV	#2,X2+1	ILOAD LOW ORDER WITH 2
004302	071227	177775		DIV	#-3,X2	IDIVIDE BY #-3
004306	013767	177776	005306	MOV	#PS,PSW	ISAVE PS
004314	122767	000024	005308	CHPB	#4,PSW	IIS PS = 4
004322	001401			BEQ	,+4	
004324	000000			HLT		IJS IS WRONG
004326	022702	000000		CHP	#0,X2	IIS QUOTIENT = 0
004332	001401			BEQ	,+4	
004334	000000			HLT		IQUOTIENT IS WRONG
004336	022703	000032		CHP	#2,X2+1	IIS REMAINDER = 2
004342	001401			BEQ	,+4	
004344	000000			HLT		IREMAINDER IS WRONG

```

*****
TEST 47 DIV -1 -2 / #3 = 0 REM = -2 PS = 4
*****
004346 012701          SCOPE
004350 012702 177777   MOV    #-1,X2      ITEST OF DIVIDE
004354 012703 177776   MOV    #-2,X2+1    ILOAD HIGH ORDER WITH -1
004360 071227 000023   DIV    #3,X2       ILOAD LOW ORDER WITH -2
004364 013767 177776   MOV    @#PS,PSW   IDIVIDE BY #3
                          ISAVE PS

004372 122767 000004 005222   CMPB  #4,PSW      IIS PS = 4
004400 001401          BEQ    ,+4
004402 000000          HLT
                          IPS IS WRONG

004404 022702 000000   CMP    #0,X2       IIS QUOTIENT = 0
004410 001401          BEQ    ,+4
004412 000000          HLT
                          IQUOTIENT IS WRONG

004414 022703 177776   CMP    #-2,X2+1    IIS REMAINDER = -2
004420 001401          BEQ    ,+4
004422 000000          HLT
                          IREMAINDER IS WRONG
  
```

```

*****
TEST 50 DIV -1 -1 / #1 = -1 REM = 0 PS = 10
*****
004424 012701          SCOPE
004426 012702 177777   MOV    #-1,X2      ITEST OF DIVIDE
004432 012703 177777   MOV    #-1,X2+1    ILOAD HIGH ORDER WITH -1
004436 071227 000021   DIV    #1,X2       ILOAD LOW ORDER WITH -1
004442 013767 177776   MOV    @#PS,PSW   IDIVIDE BY #1
                          ISAVE PS

004450 122767 000010 005144   CMPB  #10,PSW     IIS PS = 10
004456 001401          BEQ    ,+4
004460 000000          HLT
                          IPS IS WRONG

004462 022702 177777   CMP    #-1,X2       IIS QUOTIENT = -1
004466 001401          BEQ    ,+4
004470 000000          HLT
                          IQUOTIENT IS WRONG

004472 022703 000000   CMP    #0,X2+1     IIS REMAINDER = 0
004476 001401          BEQ    ,+4
004500 000000          HLT
                          IREMAINDER IS WRONG
  
```

```

*****
TEST 51 DIV 0 0 / #1 = 0 REM = 0 PS = 4
*****
004502 012701          SCOPE
004504 012702 000000   MOV    #0,X2       ITEST OF DIVIDE WITH 0
004510 012703 000000   MOV    #0,X2+1    ILOAD HIGH ORDER WITH 0
004514 071227 000001   DIV    #1,X2       ILOAD LOW ORDER WITH 0
004520 013767 177776   MOV    @#PS,PSW   IDIVIDE BY #1
                          ISAVE PS

004526 122767 000004 005074   CMPB  #4,PSW      IIS PS = 4
004534 001401          BEQ    ,+4
004536 000000          HLT
                          IPS IS WRONG

004540 022702 000000   CMP    #0,X2       IIS QUOTIENT = 0
004544 001401          BEQ    ,+4
004546 000000          HLT
                          IQUOTIENT IS WRONG

004550 022703 000000   CMP    #0,X2+1     IIS REMAINDER = 0
004554 001401          BEQ    ,+4
004556 000000          HLT
                          IREMAINDER IS WRONG
  
```

```

*****
TEST 52 DIV -1 125252 / #2 = 152525 REM = 0 PS = 10
*****
004560 012701          SCOPE
004562 012702 177777   MOV    #-1,X2      ITEST OF DIVIDE
004566 012703 125252   MOV    #125252,X2+1 ILOAD HIGH ORDER WITH -1
004572 071227 000002   DIV    #2,X2       ILOAD LOW ORDER WITH 125252
004576 013767 177776   MOV    @#PS,PSW   IDIVIDE BY #2
                          ISAVE PS

004604 122767 000010 005010   CMPB  #10,PSW     IIS PS = 10
004612 001401          BEQ    ,+4
004614 000000          HLT
                          IPS IS WRONG

004616 022702 152525   CMP    #152525,X2  IIS QUOTIENT = 152525
004622 001401          BEQ    ,+4
004624 000000          HLT
                          IQUOTIENT IS WRONG

004626 022703 000000   CMP    #0,X2+1     IIS REMAINDER = 0
004632 001401          BEQ    ,+4
004634 000000          HLT
                          IREMAINDER IS WRONG
  
```

 ITEST 53 DIV 0 52525 / #2 = 25252 REM = 1 PS = 0

004636	010701			SCOPE		ITEST OF DIVIDE
004640	012702	000000		MOV	#0,X2	ILOAD HIGH ORDER WITH 0
004644	012703	052525		MOV	#52525,X2+1	ILOAD LOW ORDER WITH 52525
004650	071227	000022		DIV	#2,X2	IDIVIDE BY #2
004654	013767	177776	004740	MOV	#0PS,PSW	ISAVE PS
004662	122767	000000	004732	CHPB	#0,PSW	IIS PS = 0
004670	001401			BEQ	,+4	
004672	000000			HLT		IIS PS IS WRONG
004674	022702	025252		CHP	#25252,X2	IIS QUOTIENT = 25252
004700	001401			BEQ	,+4	
004702	000000			HLT		IQUOTIENT IS WRONG
004704	022703	000001		CHP	#1,X2+1	IIS REMAINDER = 1
004710	001401			BEQ	,+4	
004712	000000			HLT		IREMAINDER IS WRONG

 ITEST 54 DIV -1 -1 / #-1 = 1 REM = 0 PS = 0

004714	010701			SCOPE		ITEST OF DIVIDE
004716	012702	177777		MOV	#-1,X2	ILOAD HIGH ORDER WITH -1
004722	012703	177777		MOV	#-1,X2+1	ILOAD LOW ORDER WITH -1
004726	071227	177777		DIV	#-1,X2	IDIVIDE BY #-1
004732	013767	177776	004662	MOV	#0PS,PSW	ISAVE PS
004740	122767	000000	004654	CHPB	#0,PSW	IIS PS = 0
004746	001401			BEQ	,+4	
004750	000000			HLT		IIS PS IS WRONG
004752	022702	000001		CHP	#1,X2	IIS QUOTIENT = 1
004756	001401			BEQ	,+4	
004760	000000			HLT		IQUOTIENT IS WRONG
004762	022703	000000		CHP	#0,X2+1	IIS REMAINDER = 0
004766	001401			BEQ	,+4	
004770	000000			HLT		IREMAINDER IS WRONG

 ITEST 55 DIV 25253 0 / #125252 = 100000 REM = 0 PS = 10

004772	010701			SCOPE		ITEST OF DIVIDE
004774	012702	025253		MOV	#25253,X2	ILOAD HIGH ORDER WITH 25253
005000	012703	000000		MOV	#0,X2+1	ILOAD LOW ORDER WITH 0
005004	071227	125252		DIV	#125252,X2	IDIVIDE BY #125252
005010	013767	177776	004604	MOV	#0PS,PSW	ISAVE PS
005016	122767	000010	004576	CHPB	#10,PSW	IIS PS = 10
005024	001401			BEQ	,+4	
005026	000000			HLT		IIS PS IS WRONG
005030	022702	100000		CHP	#100000,X2	IIS QUOTIENT = 100000
005034	001401			BEQ	,+4	
005036	000000			HLT		IQUOTIENT IS WRONG
005040	022703	000000		CHP	#0,X2+1	IIS REMAINDER = 0
005044	001401			BEQ	,+4	
005046	000000			HLT		IREMAINDER IS WRONG

 ITEST 56 DIV 25253 1 / #125252 = 100000 REM = 1 PS = 10

005050	010701			SCOPE		ITEST OF DIVIDE
005052	012702	025253		MOV	#25253,X2	ILOAD HIGH ORDER WITH 25253
005056	012703	000001		MOV	#1,X2+1	ILOAD LOW ORDER WITH 1
005062	071227	125252		DIV	#125252,X2	IDIVIDE BY #125252
005066	013767	177776	004526	MOV	#0PS,PSW	ISAVE PS
005074	122767	000010	004520	CHPB	#10,PSW	IIS PS = 10
005102	001401			BEQ	,+4	
005104	000000			HLT		IIS PS IS WRONG
005106	022702	100000		CHP	#100000,X2	IIS QUOTIENT = 100000
005112	001401			BEQ	,+4	
005114	000000			HLT		IQUOTIENT IS WRONG
005116	022703	000001		CHP	#1,X2+1	IIS REMAINDER = 1
005122	001401			BEQ	,+4	
005124	000000			HLT		IREMAINDER IS WRONG

 TEST 57 Div 37777 77777 / #77777 = 77777 REM = 77776 PS = 0

005126	012701			SCOPE		TEST OF DIVIDE
005130	012702	037777		MOV	#37777,%2	LOAD HIGH ORDER WITH 37777
005134	012703	077777		MOV	#77777,%2+1	LOAD LOW ORDER WITH 77777
005140	071227	077777		DIV	#77777,%2	DIVIDE BY #77777
005144	013767	177776	004450	MOV	#PS,PSW	SAVE PS
005152	122767	000000	004442	CMPB	#0,PSW	IS PS = 0
005160	001401			BEQ	,+4	
005162	000000			HLT		PS IS WRONG
005164	022702	077777		CMP	#77777,%2	IS QUOTIENT = 77777
005170	001401			BEQ	,+4	
005172	000000			HLT		QUOTIENT IS WRONG
005174	022703	077776		CMP	#77776,%2+1	IS REMAINDER = 77776
005200	001401			BEQ	,+4	
005202	000000			HLT		REMAINDER IS WRONG

 TEST 60 Div 0 100000 / #2 = 40000 REM = 0 PS = 0

005204	012701			SCOPE		TEST OF DIVIDE
005206	012702	000000		MOV	#0,%2	LOAD HIGH ORDER WITH 0
005212	012703	100000		MOV	#100000,%2+1	LOAD LOW ORDER WITH 100000
005216	071227	000000		DIV	#2,%2	DIVIDE BY #2
005222	013767	177776	004372	MOV	#PS,PSW	SAVE PS
005230	122767	000000	004364	CMPB	#0,PSW	IS PS = 0
005236	001401			BEQ	,+4	
005240	000000			HLT		PS IS WRONG
005242	022702	040000		CMP	#40000,%2	IS QUOTIENT = 40000
005246	001401			BEQ	,+4	
005250	000000			HLT		QUOTIENT IS WRONG
005252	022703	000000		CMP	#0,%2+1	IS REMAINDER = 0
005256	001401			BEQ	,+4	
005260	000000			HLT		REMAINDER IS WRONG

 TEST 61 Div 0 100001 / #2 = 40000 REM = 1 PS = 0

005262	012701			SCOPE		TEST OF DIVIDE
005264	012702	000000		MOV	#0,%2	LOAD HIGH ORDER WITH 0
005270	012703	100001		MOV	#100001,%2+1	LOAD LOW ORDER WITH 100001
005274	071227	000000		DIV	#2,%2	DIVIDE BY #2
005300	013767	177776	004314	MOV	#PS,PSW	SAVE PS
005306	122767	000000	004306	CMPB	#0,PSW	IS PS = 0
005314	001401			BEQ	,+4	
005316	000000			HLT		PS IS WRONG
005320	022702	040000		CMP	#40000,%2	IS QUOTIENT = 40000
005324	001401			BEQ	,+4	
005326	000000			HLT		QUOTIENT IS WRONG
005330	022703	000001		CMP	#1,%2+1	IS REMAINDER = 1
005334	001401			BEQ	,+4	
005336	000000			HLT		REMAINDER IS WRONG

 TEST 62 Div 20000 37776 / #77777 = 40000 REM = 77776 PS = 0

005340	012701			SCOPE		TEST OF DIVIDE
005342	012702	020000		MOV	#20000,%2	LOAD HIGH ORDER WITH 20000
005346	012703	037776		MOV	#37776,%2+1	LOAD LOW ORDER WITH 37776
005352	071227	077777		DIV	#77777,%2	DIVIDE BY #77777
005356	013767	177776	004236	MOV	#PS,PSW	SAVE PS
005364	122767	000000	004230	CMPB	#0,PSW	IS PS = 0
005372	001401			BEQ	,+4	
005374	000000			HLT		PS IS WRONG
005376	022702	040000		CMP	#40000,%2	IS QUOTIENT = 40000
005402	001401			BEQ	,+4	
005404	000000			HLT		QUOTIENT IS WRONG
005406	022703	077776		CMP	#77776,%2+1	IS REMAINDER = 77776
005412	001401			BEQ	,+4	
005414	000000			HLT		REMAINDER IS WRONG

 ITEST 63 DIV 17777 7777 / #17776 = 4000 REM = 17777 PS = 0

005416	010701			SCOPE		ITEST OF DIVIDE
005420	012702	17777		MOV	#17777,X2	ILOAD HIGH ORDER WITH 17777
005424	012703	07777		MOV	#77777,X2+1	ILOAD LOW ORDER WITH 7777
005430	071227	17776		DIV	#17776,X2	IDIVIDE BY #17776
005434	013767	17776	004160	MOV	#PS,PSW	ISAVE PS
005442	122767	00000	004152	CMPB	#0,PSW	IIS PS = 0
005450	001401			BEQ	,+4	
005452	000000			HLT		IPS IS WRONG
005454	022702	04000		CMP	#4000,X2	IIS QUOTIENT = 4000
005460	001401			BEQ	,+4	
005462	000000			HLT		IQUOTIENT IS WRONG
005464	022703	17777		CMP	#17777,X2+1	IIS REMAINDER = 17777
005470	001401			BEQ	,+4	
005472	000000			HLT		IREMAINDER IS WRONG

 ITEST 64 DIV 15777 10001 / #10000 = 4000 REM = 10001 PS = 0

005474	010701			SCOPE		ITEST OF DIVIDE
005476	012702	15777		MOV	#15777,X2	ILOAD HIGH ORDER WITH 15777
005502	012703	10001		MOV	#10001,X2+1	ILOAD LOW ORDER WITH 10001
005506	071227	10000		DIV	#10000,X2	IDIVIDE BY #10000
005512	013767	17776	004102	MOV	#PS,PSW	ISAVE PS
005520	122767	00000	004074	CMPB	#0,PSW	IIS PS = 0
005526	001401			BEQ	,+4	
005530	000000			HLT		IPS IS WRONG
005532	022702	04000		CMP	#4000,X2	IIS QUOTIENT = 4000
005536	001401			BEQ	,+4	
005540	000000			HLT		IQUOTIENT IS WRONG
005542	022703	10001		CMP	#10001,X2+1	IIS REMAINDER = 10001
005546	001401			BEQ	,+4	
005550	000000			HLT		IREMAINDER IS WRONG

 ITEST 65 DIV 0 52525 / #52525 = 1 REM = 0 PS = 0

005552	010701			SCOPE		ITEST OF DIVIDE
005554	012702	00000		MOV	#0,X2	ILOAD HIGH ORDER WITH 0
005560	012703	052525		MOV	#52525,X2+1	ILOAD LOW ORDER WITH 52525
005564	071227	052525		DIV	#52525,X2	IDIVIDE BY #52525
005570	013767	17776	004024	MOV	#PS,PSW	ISAVE PS
005576	122767	00000	004016	CMPB	#0,PSW	IIS PS = 0
005604	001401			BEQ	,+4	
005606	000000			HLT		IPS IS WRONG
005610	022702	00001		CMP	#1,X2	IIS QUOTIENT = 1
005614	001401			BEQ	,+4	
005616	000000			HLT		IQUOTIENT IS WRONG
005620	022703	00000		CMP	#0,X2+1	IIS REMAINDER = 0
005624	001401			BEQ	,+4	
005626	000000			HLT		IREMAINDER IS WRONG

 ITEST 66 DIV 0 52524 / #52525 = 0 REM = 52524 PS = 4

005630	010701			SCOPE		ITEST OF DIVIDE
005632	012702	00000		MOV	#0,X2	ILOAD HIGH ORDER WITH 0
005636	012703	052524		MOV	#52524,X2+1	ILOAD LOW ORDER WITH 52524
005642	071227	052525		DIV	#52525,X2	IDIVIDE BY #52525
005646	013767	17776	003746	MOV	#PS,PSW	ISAVE PS
005654	122767	00000	003740	CMPB	#4,PSW	IIS PS = 4
005662	001401			BEQ	,+4	
005664	000000			HLT		IPS IS WRONG
005666	022702	00000		CMP	#0,X2	IIS QUOTIENT = 0
005672	001401			BEQ	,+4	
005674	000000			HLT		IQUOTIENT IS WRONG
005676	022703	052524		CMP	#52524,X2+1	IIS REMAINDER = 52524
005702	001401			BEQ	,+4	
005704	000000			HLT		IREMAINDER IS WRONG

 ITEST 67 DIV 0 0 / #125252 = 0 REM = 0 PS = 4

005706	012701			SCOPE		ITEST OF DIVIDE
005710	012702	000000		MOV	#0,X2	ILOAD HIGH ORDER WITH 0
005714	012703	000000		MOV	#0,X2+1	ILOAD LOW ORDER WITH 0
005720	071227	125252		DIV	#125252,X2	IDIVIDE BY #125252
005724	013767	177776	003670	MOV	##PS,PSW	ISAVE PS
005732	122767	000004	003602	CMPB	#4,PSW	IIS PS = 4
005740	001401			BEQ	,+4	
005742	000000			HLT		IJS IS WRONG
005744	022702	000000		CMP	#0,X2	IIS QUOTIENT = 0
005750	001401			BEQ	,+4	
005752	000000			HLT		IQUOTIENT IS WRONG
005754	022703	000000		CMP	#0,X2+1	IIS REMAINDER = 0
005760	001401			BEQ	,+4	
005762	000000			HLT		IREMAINDER IS WRONG

 ITEST 70 DIV 177614 66560 / #40342 = 177070 REM = 0 PS = 10

005764	012701			SCOPE		ITEST OF DIVIDE
005766	012702	177614		MOV	#177614,X2	ILOAD HIGH ORDER WITH 177614
005772	012703	066560		MOV	#66560,X2+1	ILOAD LOW ORDER WITH 66560
005776	071227	040342		DIV	#40342,X2	IDIVIDE BY #40342
006002	013767	177776	003612	MOV	##PS,PSW	ISAVE PS
006010	122767	000010	003604	CMPB	#10,PSW	IIS PS = 10
006016	001401			BEQ	,+4	
006020	000000			HLT		IJS IS WRONG
006022	022702	177070		CMP	#177070,X2	IIS QUOTIENT = 177070
006026	001401			BEQ	,+4	
006030	000000			HLT		IQUOTIENT IS WRONG
006032	022703	000000		CMP	#0,X2+1	IIS REMAINDER = 0
006036	001401			BEQ	,+4	
006040	000000			HLT		IREMAINDER IS WRONG

 ITEST 71 DIV 0 77777 / #0 = DUMMY REM = DUMMY PS = 3

006042	012701			SCOPE		ITEST OF DIVIDE
006044	012702	000000		MOV	#0,X2	ILOAD HIGH ORDER WITH 0
006050	012703	077777		MOV	#77777,X2+1	ILOAD LOW ORDER WITH 77777
006054	071227	000000		DIV	#0,X2	IDIVIDE BY #0
006060	013767	177776	003534	MOV	##PS,PSW	ISAVE PS
006066	042767	000014	003526	BIC	#14,PSW	
006074	122767	000023	003520	CMPB	#3,PSW	IIS PS = 3
006102	001401			BEQ	,+4	
006104	000000			HLT		IJS IS WRONG

 ITEST 72 DIV 77777 177777 / #2 = DUMMY REM = DUMMY PS = 2

006106	012701			SCOPE		ITEST OF DIVIDE
006110	012702	077777		MOV	#77777,X2	ILOAD HIGH ORDER WITH 77777
006114	012703	177777		MOV	#177777,X2+1	ILOAD LOW ORDER WITH 177777
006120	071227	000002		DIV	#2,X2	IDIVIDE BY #2
006124	013767	177776	003470	MOV	##PS,PSW	ISAVE PS
006132	042767	000014	003462	BIC	#14,PSW	
006140	122767	000022	003454	CMPB	#2,PSW	IIS PS = 2
006146	001401			BEQ	,+4	
006150	000000			HLT		IJS IS WRONG

 ITEST 73 DIV 0 4 / #2 = 2 REM = 0 PS = 0

006152	010701			SCOPE		ITEST OF DIVIDE
006154	012704	000000		MOV	#0,X4	ILOAD HIGH ORDER WITH 0
006160	012705	000004		MOV	#4,X4+1	ILOAD LOW ORDER WITH 4
006164	071427	000002		DIV	#2,X4	IDIVIDE BY #2
006170	013767	177776	003424	MOV	#0PS,PSW	ISAVE PS
006176	122767	000000	003416	CHPB	#0,PSW	IIS PS = 0
006204	001401			BEQ	+.4	
006206	000000			HLT		IJS IS WRONG
006210	022704	000002		CMP	#2,X4	IIS QUOTIENT = 2
006214	001401			BEQ	+.4	
006216	000000			HLT		IQUOTIENT IS WRONG
006220	022705	000000		CMP	#0,X4+1	IIS REMAINDER = 0
006224	001401			BEQ	+.4	
006226	000000			HLT		IREMAINDER IS WRONG

 ITEST 74 DIV 0 9 / #3 = 3 REM = 0 PS = 0

006230	010701			SCOPE		ITEST OF DIVIDE
006232	012704	000000		MOV	#0,X4	ILOAD HIGH ORDER WITH 0
006236	012705	000011		MOV	#9,X4+1	ILOAD LOW ORDER WITH 9.
006242	071427	000003		DIV	#3,X4	IDIVIDE BY #3
006246	013767	177776	003346	MOV	#0PS,PSW	ISAVE PS
006254	122767	000000	003340	CHPB	#0,PSW	IIS PS = 0
006262	001401			BEQ	+.4	
006264	000000			HLT		IJS IS WRONG
006266	022704	000003		CMP	#3,X4	IIS QUOTIENT = 3
006272	001401			BEQ	+.4	
006274	000000			HLT		IQUOTIENT IS WRONG
006276	022705	000000		CMP	#0,X4+1	IIS REMAINDER = 0
006302	001401			BEQ	+.4	
006304	000000			HLT		IREMAINDER IS WRONG

 ITEST 75 DIV -1 -4 / #2 = -2 REM = 0 PS = 10

006306	010701			SCOPE		ITEST OF DIVIDE
006310	012704	177777		MOV	#-1,X4	ILOAD HIGH ORDER WITH -1
006314	012705	177774		MOV	#-4,X4+1	ILOAD LOW ORDER WITH -4
006320	071427	000002		DIV	#2,X4	IDIVIDE BY #2
006324	013767	177776	003270	MOV	#0PS,PSW	ISAVE PS
006332	122767	000010	003262	CHPB	#10,PSW	IIS PS = 10
006340	001401			BEQ	+.4	
006342	000000			HLT		IJS IS WRONG
006344	022704	177776		CMP	#-2,X4	IIS QUOTIENT = -2
006350	001401			BEQ	+.4	
006352	000000			HLT		IQUOTIENT IS WRONG
006354	022705	000000		CMP	#0,X4+1	IIS REMAINDER = 0
006360	001401			BEQ	+.4	
006362	000000			HLT		IREMAINDER IS WRONG

 ITEST 76 DIV -1 -9 / #3 = -3 REM = 0 PS = 10

006364	010701			SCOPE		ITEST OF DIVIDE
006366	012704	177777		MOV	#-1,X4	ILOAD HIGH ORDER WITH -1
006372	012705	177767		MOV	#-9,X4+1	ILOAD LOW ORDER WITH -9.
006376	071427	000003		DIV	#3,X4	IDIVIDE BY #3
006402	013767	177776	003212	MOV	#0PS,PSW	ISAVE PS
006410	122767	000010	003204	CHPB	#10,PSW	IIS PS = 10
006416	001401			BEQ	+.4	
006420	000000			HLT		IJS IS WRONG
006422	022704	177775		CMP	#-3,X4	IIS QUOTIENT = -3
006426	001401			BEQ	+.4	
006430	000000			HLT		IQUOTIENT IS WRONG
006432	022705	000000		CMP	#0,X4+1	IIS REMAINDER = 0
006436	001401			BEQ	+.4	
006440	000000			HLT		IREMAINDER IS WRONG

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;*****
;TEST 77 DIV 0 9 / #2 = 4 REM = 1 PS = 0
;*****
006442 012701          SCOPE
006444 012704 000000    MOV #0,X4          ;TEST OF DIVIDE
006450 012705 000011    MOV #9,X4+1       ;LOAD HIGH ORDER WITH 0
006454 071427 000022    DIV #2,X4         ;LOAD LOW ORDER WITH 9,
006460 013767 177776 003134 MOV @#PS,PSW     ;DIVIDE BY #2
;SAVE PS

006466 122767 000000 003126 CMPB #0,PSW       ;IS PS = 0
006474 001401          BEQ .+4
006476 000000          HLT                ;PS IS WRONG

006500 022704 000004          CMP #4,X4         ;IS QUOTIENT = 4
006504 001401          BEQ .+4
006506 000000          HLT                ;QUOTIENT IS WRONG

006510 022705 000021          CMP #1,X4+1       ;IS REMAINDER = 1
006514 001401          BEQ .+4
006516 000000          HLT                ;REMAINDER IS WRONG
    
```

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;*****
;TEST 100 DIV -1 9 / #2 = -4 REM = -1 PS = 10
;*****
006520 012701          SCOPE
006522 012704 177777    MOV #-1,X4        ;TEST OF DIVIDE
006526 012705 177767    MOV #-9,X4+1     ;LOAD HIGH ORDER WITH -1
006532 071427 000022    DIV #2,X4         ;LOAD LOW ORDER WITH -9,
006536 013767 177776 003056 MOV @#PS,PSW     ;DIVIDE BY #2
;SAVE PS

006544 122767 000010 003050 CMPB #10,PSW     ;IS PS = 10
006552 001401          BEQ .+4
006554 000000          HLT                ;PS IS WRONG

006556 022704 177774          CMP #-4,X4        ;IS QUOTIENT = -4
006562 001401          BEQ .+4
006564 000000          HLT                ;QUOTIENT IS WRONG

006566 022705 177777          CMP #-1,X4+1     ;IS REMAINDER = -1
006572 001401          BEQ .+4
006574 000000          HLT                ;REMAINDER IS WRONG
    
```

```

;*****
;TEST 101 DIV 0 9 / #2 = -4 REM = 1 PS = 10
;*****
006676 012701          SCOPE
006680 012704 000000    MOV #0,X4          ;TEST OF DIVIDE
006684 012705 000011    MOV #9,X4+1       ;LOAD HIGH ORDER WITH 0
006610 071427 177776 003000 DIV #-2,X4         ;LOAD LOW ORDER WITH 9,
006614 013767 177776          MOV @#PS,PSW     ;DIVIDE BY #-2
;SAVE PS

006622 122767 000010 002772 CMPB #10,PSW     ;IS PS = 10
006630 001401          BEQ .+4
006632 000000          HLT                ;PS IS WRONG

006634 022704 177774          CMP #-4,X4        ;IS QUOTIENT = -4
006640 001401          BEQ .+4
006642 000000          HLT                ;QUOTIENT IS WRONG

006644 022705 000021          CMP #1,X4+1       ;IS REMAINDER = 1
006650 001401          BEQ .+4
006652 000000          HLT                ;REMAINDER IS WRONG
    
```

```

;*****
;TEST 102 DIV 0 2 / #3 = 0 REM = 2 PS = 4
;*****
006654 012701          SCOPE
006656 012704 000000    MOV #0,X4          ;TEST OF DIVIDE
006662 012705 000022    MOV #2,X4+1       ;LOAD HIGH ORDER WITH 0
006666 071427 000023    DIV #3,X4         ;LOAD LOW ORDER WITH 2
006672 013767 177776 002722 MOV @#PS,PSW     ;DIVIDE BY #3
;SAVE PS

006700 122767 000024 002714 CMPB #4,PSW       ;IS PS = 4
006706 001401          BEQ .+4
006710 000000          HLT                ;PS IS WRONG

006712 022704 000000          CMP #0,X4         ;IS QUOTIENT = 0
006716 001401          BEQ .+4
006720 000000          HLT                ;QUOTIENT IS WRONG

006722 022705 000022          CMP #2,X4+1       ;IS REMAINDER = 2
006726 001401          BEQ .+4
006730 000000          HLT                ;REMAINDER IS WRONG
    
```

 TEST 103 Div 0 2 / #3 = 0 REM = 2 PS = 4

006732	010701			SCOPE		TEST OF DIVIDE
006734	012704	000000		MOV	#0,X4	LOAD HIGH ORDER WITH 0
006740	012705	000002		MOV	#2,X4+1	LOAD LOW ORDER WITH 2
006744	071427	177775		DIV	#-3,X4	DIVIDE BY #-3
006750	013767	177776	002644	MOV	##PS,PSW	SAVE PS
006756	122767	000004	002636	CMPB	#4,PSW	IS PS = 4
006764	001401			BEQ	,+4	
006766	000000			HLT		PS IS WRONG
006770	022704	000000		CMP	#0,X4	IS QUOTIENT = 0
006774	001401			BEQ	,+4	
006776	000000			HLT		QUOTIENT IS WRONG
007000	022705	000002		CMP	#2,X4+1	IS REMAINDER = 2
007004	001401			BEQ	,+4	
007006	000000			HLT		REMAINDER IS WRONG

 TEST 104 Div -1 2 / #3 = 0 REM = -2 PS = 4

007010	010701			SCOPE		TEST OF DIVIDE
007012	012704	177777		MOV	#-1,X4	LOAD HIGH ORDER WITH -1
007016	012705	177776		MOV	#-2,X4+1	LOAD LOW ORDER WITH -2
007022	071427	000003		DIV	#3,X4	DIVIDE BY #3
007026	013767	177776	002566	MOV	##PS,PSW	SAVE PS
007034	122767	000004	002560	CMPB	#4,PSW	IS PS = 4
007042	001401			BEQ	,+4	
007044	000000			HLT		PS IS WRONG
007046	022704	000000		CMP	#0,X4	IS QUOTIENT = 0
007052	001401			BEQ	,+4	
007054	000000			HLT		QUOTIENT IS WRONG
007056	022705	177776		CMP	#-2,X4+1	IS REMAINDER = -2
007062	001401			BEQ	,+4	
007064	000000			HLT		REMAINDER IS WRONG

 TEST 105 Div -1 1 / #1 = -1 REM = 0 PS = 10

007066	010701			SCOPE		TEST OF DIVIDE
007070	012704	177777		MOV	#-1,X4	LOAD HIGH ORDER WITH -1
007074	012705	177777		MOV	#-1,X4+1	LOAD LOW ORDER WITH -1
007100	071427	000001		DIV	#1,X4	DIVIDE BY #1
007104	013767	177776	002510	MOV	##PS,PSW	SAVE PS
007112	122767	000010	002502	CMPB	#10,PSW	IS PS = 10
007120	001401			BEQ	,+4	
007122	000000			HLT		PS IS WRONG
007124	022704	177777		CMP	#-1,X4	IS QUOTIENT = -1
007130	001401			BEQ	,+4	
007132	000000			HLT		QUOTIENT IS WRONG
007134	022705	000000		CMP	#0,X4+1	IS REMAINDER = 0
007140	001401			BEQ	,+4	
007142	000000			HLT		REMAINDER IS WRONG

 TEST 106 Div 0 2 / #1 = 0 REM = 0 PS = 4

007144	010701			SCOPE		TEST OF DIVIDE
007146	012704	000000		MOV	#0,X4	LOAD HIGH ORDER WITH 0
007152	012705	000000		MOV	#0,X4+1	LOAD LOW ORDER WITH 0
007156	071427	000001		DIV	#1,X4	DIVIDE BY #1
007162	013767	177776	002432	MOV	##PS,PSW	SAVE PS
007170	122767	000004	002424	CMPB	#4,PSW	IS PS = 4
007176	001401			BEQ	,+4	
007200	000000			HLT		PS IS WRONG
007202	022704	000000		CMP	#0,X4	IS QUOTIENT = 0
007206	001401			BEQ	,+4	
007210	000000			HLT		QUOTIENT IS WRONG
007212	022705	000000		CMP	#0,X4+1	IS REMAINDER = 0
007216	001401			BEQ	,+4	
007220	000000			HLT		REMAINDER IS WRONG

 TEST 107 DIV -1 125252 / #2 = 152525 REM = 0 PS = 10

007222	010701			SCOPE		TEST OF DIVIDE
007224	012704	177777		MOV	#-1,X4	ILOAD HIGH ORDER WITH -1
007230	012705	125252		MOV	#125252,X4+1	ILOAD LOW ORDER WITH 125252
007234	011427	000032		DIV	#2,X4	IDIVIDE BY #2
007240	013767	177776	002354	MOV	0#PS,PSW	ISAVE PS
007246	122767	000010	002346	CMPB	#10,PSW	IS PS = 10
007254	001401			BEQ	,+4	
007256	000000			HLT		IPS IS WRONG
007260	022704	152525		CMP	#152525,X4	IS QUOTIENT = 152525
007264	001401			BEQ	,+4	
007266	000001			HLT		IQUOTIENT IS WRONG
007270	022705	000030		CMP	#0,X4+1	IS REMAINDER = 0
007274	001401			BEQ	,+4	
007276	000000			HLT		IREMAINDER IS WRONG

 TEST 110 DIV 0 52525 / #2 = 25252 REM = 1 PS = 0

007300	010701			SCOPE		TEST OF DIVIDE
007302	012704	000030		MOV	#0,X4	ILOAD HIGH ORDER WITH 0
007306	012705	052525		MOV	#52525,X4+1	ILOAD LOW ORDER WITH 52525
007312	011427	000032		DIV	#2,X4	IDIVIDE BY #2
007316	013767	177776	002276	MOV	0#PS,PSW	ISAVE PS
007324	122767	000030	002270	CMPB	#0,PSW	IS PS = 0
007332	001401			BEQ	,+4	
007334	000000			HLT		IPS IS WRONG
007336	022704	025252		CMP	#25252,X4	IS QUOTIENT = 25252
007342	001401			BEQ	,+4	
007344	000000			HLT		IQUOTIENT IS WRONG
007346	022705	000031		CMP	#1,X4+1	IS REMAINDER = 1
007352	001401			BEQ	,+4	
007354	000000			HLT		IREMAINDER IS WRONG

 TEST 111 DIV -1 #1 / #-1 = 1 REM = 0 PS = 0

007356	010701			SCOPE		TEST OF DIVIDE
007360	012704	177777		MOV	#-1,X4	ILOAD HIGH ORDER WITH -1
007364	012705	177777		MOV	#-1,X4+1	ILOAD LOW ORDER WITH -1
007370	011427	177777		DIV	#-1,X4	IDIVIDE BY #-1
007374	013767	177776	002220	MOV	0#PS,PSW	ISAVE PS
007402	122767	000030	002212	CMPB	#0,PSW	IS PS = 0
007410	001401			BEQ	,+4	
007412	000000			HLT		IPS IS WRONG
007414	022704	000031		CMP	#1,X4	IS QUOTIENT = 1
007420	001401			BEQ	,+4	
007422	000000			HLT		IQUOTIENT IS WRONG
007424	022705	000030		CMP	#0,X4+1	IS REMAINDER = 0
007430	001401			BEQ	,+4	
007432	000000			HLT		IREMAINDER IS WRONG

 TEST 112 DIV 25253 0 / #125252 = 100000 REM = 0 PS = 10

007434	010701			SCOPE		TEST OF DIVIDE
007436	012704	025253		MOV	#25253,X4	ILOAD HIGH ORDER WITH 25253
007442	012705	000030		MOV	#0,X4+1	ILOAD LOW ORDER WITH 0
007446	011427	125252		DIV	#125252,X4	IDIVIDE BY #125252
007452	013767	177776	002142	MOV	0#PS,PSW	ISAVE PS
007460	122767	000010	002134	CMPB	#10,PSW	IS PS = 10
007466	001401			BEQ	,+4	
007470	000000			HLT		IPS IS WRONG
007472	022704	100000		CMP	#100000,X4	IS QUOTIENT = 100000
007476	001401			BEQ	,+4	
007500	000000			HLT		IQUOTIENT IS WRONG
007502	022705	000030		CMP	#0,X4+1	IS REMAINDER = 0
007506	001401			BEQ	,+4	
007510	000000			HLT		IREMAINDER IS WRONG

 ;TEST 113 Div 25253 1 / #129252 = 100000 REM = 1 PS = 10

007512	010701			SCOPE		;TEST OF DIVIDE
007514	012704	025253		MOV	#25253,X4	;LOAD HIGH ORDER WITH 25253
007520	012705	000001		MOV	#1,X4+1	;LOAD LOW ORDER WITH 1
007524	071427	129252		DIV	#129252,X4	;DIVIDE BY #129252
007530	013767	177776	002064	MOV	#PS,PSW	;SAVE PS
007536	122767	000010	002056	CMPB	#10,PSW	;IS PS = 10
007544	001401			BEQ	,+4	
007546	000000			HLT		;PS IS WRONG
007550	022704	100000		CMP	#100000,X4	;IS QUOTIENT = 100000
007554	001401			BEQ	,+4	
007556	000000			HLT		;QUOTIENT IS WRONG
007560	022705	000001		CMP	#1,X4+1	;IS REMAINDER = 1
007564	001401			BEQ	,+4	
007566	000000			HLT		;REMAINDER IS WRONG

 ;TEST 114 Div 37777 77777 / #77777 = 77777 REM = 77776 PS = 0

007570	010701			SCOPE		;TEST OF DIVIDE
007572	012704	037777		MOV	#37777,X4	;LOAD HIGH ORDER WITH 37777
007576	012705	077777		MOV	#77777,X4+1	;LOAD LOW ORDER WITH 77777
007602	071427	077777		DIV	#77777,X4	;DIVIDE BY #77777
007606	013767	177776	002006	MOV	#PS,PSW	;SAVE PS
007614	122767	000000	002000	CMPB	#0,PSW	;IS PS = 0
007622	001401			BEQ	,+4	
007624	000000			HLT		;PS IS WRONG
007626	022704	077777		CMP	#77777,X4	;IS QUOTIENT = 77777
007632	001401			BEQ	,+4	
007634	000000			HLT		;QUOTIENT IS WRONG
007636	022705	077776		CMP	#77776,X4+1	;IS REMAINDER = 77776
007642	001401			BEQ	,+4	
007644	000000			HLT		;REMAINDER IS WRONG

 ;TEST 115 Div 0 100000 / #2 = 40000 REM = 0 PS = 0

007646	010701			SCOPE		;TEST OF DIVIDE
007650	012704	000000		MOV	#0,X4	;LOAD HIGH ORDER WITH 0
007654	012705	100000		MOV	#100000,X4+1	;LOAD LOW ORDER WITH 100000
007660	071427	000002		DIV	#2,X4	;DIVIDE BY #2
007664	013767	177776	001730	MOV	#PS,PSW	;SAVE PS
007672	122767	000000	001722	CMPB	#0,PSW	;IS PS = 0
007700	001401			BEQ	,+4	
007702	000000			HLT		;PS IS WRONG
007704	022704	040000		CMP	#40000,X4	;IS QUOTIENT = 40000
007710	001401			BEQ	,+4	
007712	000000			HLT		;QUOTIENT IS WRONG
007714	022705	000000		CMP	#0,X4+1	;IS REMAINDER = 0
007720	001401			BEQ	,+4	
007722	000000			HLT		;REMAINDER IS WRONG

 ;TEST 116 Div 0 100001 / #2 = 40000 REM = 1 PS = 0

007724	010701			SCOPE		;TEST OF DIVIDE
007726	012704	000000		MOV	#0,X4	;LOAD HIGH ORDER WITH 0
007732	012705	100001		MOV	#100001,X4+1	;LOAD LOW ORDER WITH 100001
007736	071427	000002		DIV	#2,X4	;DIVIDE BY #2
007742	013767	177776	001652	MOV	#PS,PSW	;SAVE PS
007750	122767	000000	001644	CMPB	#0,PSW	;IS PS = 0
007756	001401			BEQ	,+4	
007760	000000			HLT		;PS IS WRONG
007762	022704	040000		CMP	#40000,X4	;IS QUOTIENT = 40000
007766	001401			BEQ	,+4	
007770	000000			HLT		;QUOTIENT IS WRONG
007772	022705	000001		CMP	#1,X4+1	;IS REMAINDER = 1
007776	001401			BEQ	,+4	
007778	000000			HLT		;REMAINDER IS WRONG

ITEST 117 DIV 20000 37776 / #77777 = 40000 REM = 77776 PS = 0

010022	010701			SCOPE		ITEST OF DIVIDE
010004	012704	020000		MOV	#20000,X4	ILOAD HIGH ORDER WITH 20000
010010	012705	037776		MOV	#37776,X4+1	ILOAD LOW ORDER WITH 37776
010014	071427	077777		DIV	#77777,X4	IDIVIDE BY #77777
010020	013767	177776	001574	MOV	@#PS,PSW	ISAVE PS
010026	122767	000000	001566	CMPB	#0,PSW	IIS PS = 0
010034	001401			BEQ	.,+4	
010036	000000			HLT		IPS IS WRONG
010040	022704	040000		CMP	#40000,X4	IIS QUOTIENT = 40000
010044	001401			BEQ	.,+4	
010046	000000			HLT		IQUOTIENT IS WRONG
010050	022705	077776		CMP	#77776,X4+1	IIS REMAINDER = 77776
010054	001401			BEQ	.,+4	
010056	000000			HLT		IREMAINDER IS WRONG

ITEST 120 DIV 177777 77777 / #177776 = 40000 REM = 177777 PS = 0

010060	010701			SCOPE		ITEST OF DIVIDE
010062	012704	177777		MOV	#177777,X4	ILOAD HIGH ORDER WITH 177777
010066	012705	077777		MOV	#77777,X4+1	ILOAD LOW ORDER WITH 77777
010072	071427	177776		DIV	#177776,X4	IDIVIDE BY #177776
010076	013767	177776	001516	MOV	@#PS,PSW	ISAVE PS
010104	122767	000000	001510	CMPB	#0,PSW	IIS PS = 0
010112	001401			BEQ	.,+4	
010114	000000			HLT		IPS IS WRONG
010116	022704	040000		CMP	#40000,X4	IIS QUOTIENT = 40000
010122	001401			BEQ	.,+4	
010124	000000			HLT		IQUOTIENT IS WRONG
010126	022705	177777		CMP	#177777,X4+1	IIS REMAINDER = 177777
010132	001401			BEQ	.,+4	
010134	000000			HLT		IREMAINDER IS WRONG

ITEST 121 DIV 157777 100001 / #100000 = 40000 REM = 100001 PS = 0

010136	010701			SCOPE		ITEST OF DIVIDE
010140	012704	157777		MOV	#157777,X4	ILOAD HIGH ORDER WITH 157777
010144	012705	100001		MOV	#100001,X4+1	ILOAD LOW ORDER WITH 100001
010150	071427	100000		DIV	#100000,X4	IDIVIDE BY #100000
010154	013767	177776	001440	MOV	@#PS,PSW	ISAVE PS
010162	122767	000000	001432	CMPB	#0,PSW	IIS PS = 0
010170	001401			BEQ	.,+4	
010172	000000			HLT		IPS IS WRONG
010174	022704	040000		CMP	#40000,X4	IIS QUOTIENT = 40000
010200	001401			BEQ	.,+4	
010202	000000			HLT		IQUOTIENT IS WRONG
010204	022705	100001		CMP	#100001,X4+1	IIS REMAINDER = 100001
010210	001401			BEQ	.,+4	
010212	000000			HLT		IREMAINDER IS WRONG

ITEST 122 DIV 0 52525 / #52525 = 1 REM = 0 PS = 0

010214	010701			SCOPE		ITEST OF DIVIDE
010216	012704	000000		MOV	#0,X4	ILOAD HIGH ORDER WITH 0
010222	012705	052525		MOV	#52525,X4+1	ILOAD LOW ORDER WITH 52525
010226	071427	052525		DIV	#52525,X4	IDIVIDE BY #52525
010232	013767	177776	001362	MOV	@#PS,PSW	ISAVE PS
010240	122767	000000	001354	CMPB	#0,PSW	IIS PS = 0
010246	001401			BEQ	.,+4	
010250	000000			HLT		IPS IS WRONG
010252	022704	000001		CMP	#1,X4	IIS QUOTIENT = 1
010256	001401			BEQ	.,+4	
010260	000000			HLT		IQUOTIENT IS WRONG
010262	022705	000000		CMP	#0,X4+1	IIS REMAINDER = 0
010266	001401			BEQ	.,+4	
010270	000000			HLT		IREMAINDER IS WRONG

 TEST 123 DIV 0 52524 / #52525 = 0 REM = 52524 PS = 4

010272	010701			SCOPE		TEST OF DIVIDE
010274	012704	000000		MOV	#0,X4	ILOAD HIGH ORDER WITH 0
010300	012705	052524		MOV	#52524,X4+1	ILOAD LOW ORDER WITH 0
010304	071427	052525		DIV	#52525,X4	IDIVIDE BY #52525
010310	013767	177776	001304	MOV	#PS,PSW	ISAVE PS
010316	122767	000024	001276	CMPB	#4,PSW	IS PS = 4
010324	001401			BEQ	,+4	
010326	000000			HLT		IPS IS WRONG
010330	022704	000000		CMP	#0,X4	IS QUOTIENT = 0
010334	001401			BEQ	,+4	
010336	000000			HLT		IQUOTIENT IS WRONG
010340	022705	052524		CMP	#52524,X4+1	IS REMAINDER = 52524
010344	001401			BEQ	,+4	
010346	000000			HLT		IREMAINDER IS WRONG

 TEST 124 DIV 0 0 / #125252 = 0 REM = 0 PS = 4

010350	010701			SCOPE		TEST OF DIVIDE
010352	012704	000000		MOV	#0,X4	ILOAD HIGH ORDER WITH 0
010356	012705	000000		MOV	#0,X4+1	ILOAD LOW ORDER WITH 0
010362	071427	125252		DIV	#125252,X4	IDIVIDE BY #125252
010366	013767	177776	001226	MOV	#PS,PSW	ISAVE PS
010374	122767	000004	001220	CMPB	#4,PSW	IS PS = 4
010402	001401			BEQ	,+4	
010404	000000			HLT		IPS IS WRONG
010406	022704	000000		CMP	#0,X4	IS QUOTIENT = 0
010412	001401			BEQ	,+4	
010414	000000			HLT		IQUOTIENT IS WRONG
010416	022705	000000		CMP	#0,X4+1	IS REMAINDER = 0
010422	001401			BEQ	,+4	
010424	000000			HLT		IREMAINDER IS WRONG

 TEST 125 DIV 177614 66560 / #40342 = 177070 REM = 0 PS = 10

010426	010701			SCOPE		TEST OF DIVIDE
010430	012704	177614		MOV	#177614,X4	ILOAD HIGH ORDER WITH 177614
010434	012705	066560		MOV	#66560,X4+1	ILOAD LOW ORDER WITH 66560
010440	071427	040342		DIV	#40342,X4	IDIVIDE BY #40342
010444	013767	177776	001150	MOV	#PS,PSW	ISAVE PS
010452	122767	000010	001142	CMPB	#10,PSW	IS PS = 10
010460	001401			BEQ	,+4	
010462	000000			HLT		IPS IS WRONG
010464	022704	177070		CMP	#177070,X4	IS QUOTIENT = 177070
010470	001401			BEQ	,+4	
010472	000000			HLT		IQUOTIENT IS WRONG
010474	022705	000000		CMP	#0,X4+1	IS REMAINDER = 0
010500	001401			BEQ	,+4	
010502	000000			HLT		IREMAINDER IS WRONG

 TEST 126 DIV 0 77777 / #0 = DUMMY REM = DUMMY PS = 3

010504	010701			SCOPE		TEST OF DIVIDE
010506	012704	000000		MOV	#0,X4	ILOAD HIGH ORDER WITH 0
010512	012705	077777		MOV	#77777,X4+1	ILOAD LOW ORDER WITH 77777
010516	071427	000000		DIV	#0,X4	IDIVIDE BY #0
010522	013767	177776	001072	MOV	#PS,PSW	ISAVE PS
010530	042767	000014	001064	BIC	#14,PSW	
010536	122767	000003	001056	CMPB	#3,PSW	IS PS = 3
012544	001401			BEQ	,+4	
012546	000000			HLT		IPS IS WRONG

 ITEST 127 DIV 77777 177777 / #2 = DUMMY REM = DUMMY PS = 2

012550	012701			SCOPE		ITEST OF DIVIDE
012552	012704	077777		MOV	#77777,%4	ILOAD HIGH ORDER WITH 77777
012556	012705	177777		MOV	#177777,%4+1	ILOAD LOW ORDER WITH 177777
012562	01427	000022		DIV	#2,%4	IDIVIDE BY #2
012566	013767	177776	001026	MOV	@#PS,PSW	ISAVE PS
012574	042767	000014	001020	BIC	#14,PSW	
012602	122767	000022	001012	CMPB	#2,PSW	IIS PS = 2
012610	001401			BEQ	.,+4	
012612	000000			HLT		I PS IS WRONG
012614	012702	000022		MOV	#2,%2	
012620	012703	011626		MOV	#S1,%3	
012624	012704	011630		MOV	#S2,%4	

 ITEST 130 DIV 0 52525 / S1 = 25252 REM = 1 PS = 0

012630	012701			SCOPE		ITEST OF DIVIDE
012632	012700	000000		MOV	#0,%0	ILOAD HIGH ORDER WITH 0
012636	012701	052525		MOV	#52525,%0+1	ILOAD LOW ORDER WITH 52525
012642	071007	000760		DIV	S1,%0	IDIVIDE BY S1
012646	013767	177776	000746	MOV	@#PS,PSW	ISAVE PS
012654	122767	000000	000740	CMPB	#0,PSW	IIS PS = 0
012662	001401			BEQ	.,+4	
012664	000000			HLT		I PS IS WRONG
012666	022700	025252		CMP	#25252,%0	IIS QUOTIENT = 25252
012672	001401			BEQ	.,+4	
012674	000000			HLT		IQUOTIENT IS WRONG
012676	022701	000021		CMP	#1,%0+1	IIS REMAINDER = 1
012702	001401			BEQ	.,+4	
012704	000000			HLT		I REMAINDER IS WRONG

 ITEST 131 DIV 0 52525 / #S2 = 25252 REM = 1 PS = 0

012706	012701			SCOPE		ITEST OF DIVIDE
012710	012700	000000		MOV	#0,%0	ILOAD HIGH ORDER WITH 0
012714	012701	052525		MOV	#52525,%0+1	ILOAD LOW ORDER WITH 52525
012720	071077	000724		DIV	@S2,%0	IDIVIDE BY @S2
012724	013767	177776	000670	MOV	@#PS,PSW	ISAVE PS
012732	122767	000000	000662	CMPB	#0,PSW	IIS PS = 0
012740	001401			BEQ	.,+4	
012742	000000			HLT		I PS IS WRONG
012744	022700	025252		CMP	#25252,%0	IIS QUOTIENT = 25252
012750	001401			BEQ	.,+4	
012752	000000			HLT		IQUOTIENT IS WRONG
012754	022701	000021		CMP	#1,%0+1	IIS REMAINDER = 1
012760	001401			BEQ	.,+4	
012762	000000			HLT		I REMAINDER IS WRONG

 ITEST 132 DIV 0 52525 / @#S1 = 25252 REM = 1 PS = 0

012764	012701			SCOPE		ITEST OF DIVIDE
012766	012700	000000		MOV	#0,%0	ILOAD HIGH ORDER WITH 0
012772	012701	052525		MOV	#52525,%0+1	ILOAD LOW ORDER WITH 52525
012776	071037	011626		DIV	@#S1,%0	IDIVIDE BY @#S1
012802	013767	177776	000612	MOV	@#PS,PSW	ISAVE PS
012810	122767	000000	000604	CMPB	#0,PSW	IIS PS = 0
012816	001401			BEQ	.,+4	
012820	000000			HLT		I PS IS WRONG
012822	022700	025252		CMP	#25252,%0	IIS QUOTIENT = 25252
012826	001401			BEQ	.,+4	
012830	000000			HLT		IQUOTIENT IS WRONG
012832	022701	000021		CMP	#1,%0+1	IIS REMAINDER = 1
012836	001401			BEQ	.,+4	
012840	000000			HLT		I REMAINDER IS WRONG

 ITEST 133 DIV 0 52525 / X2 = 25252 REM = 1 PS = 0

011042	010701			SCOPE		I TEST OF DIVIDE
011044	012700	000000		MOV	#0,X0	I LOAD HIGH ORDER WITH 0
011050	012701	052525		MOV	#52525,X0+1	I LOAD LOW ORDER WITH 52525
011054	071002			DIV	X2,X0	I DIVIDE BY X2
011056	013767	177776	000536	MOV	#PS,PSW	I SAVE PS
011064	122767	000000	000530	CMPB	#0,PSW	I IS PS = 0
011072	001401			BEQ	,+4	
011074	000000			HLT		I PS IS WRONG
011076	022700	025252		CMP	#25252,X0	I IS QUOTIENT = 25252
011102	001401			BEQ	,+4	
011104	000000			HLT		I QUOTIENT IS WRONG
011106	022701	000001		CMP	#1,X0+1	I IS REMAINDER = 1
011112	001401			BEQ	,+4	
011114	000000			HLT		I REMAINDER IS WRONG

 ITEST 134 DIV 0 52525 / (3) = 25252 REM = 1 PS = 0

011116	010701			SCOPE		I TEST OF DIVIDE
011120	012700	000000		MOV	#0,X0	I LOAD HIGH ORDER WITH 0
011124	012701	052525		MOV	#52525,X0+1	I LOAD LOW ORDER WITH 52525
011130	071023			DIV	(3),X0	I DIVIDE BY (3)
011132	013767	177776	000462	MOV	#PS,PSW	I SAVE PS
011140	122767	000000	000454	CMPB	#0,PSW	I IS PS = 0
011146	001401			BEQ	,+4	
011150	000000			HLT		I PS IS WRONG
011152	022700	025252		CMP	#25252,X0	I IS QUOTIENT = 25252
011156	001401			BEQ	,+4	
011160	000000			HLT		I QUOTIENT IS WRONG
011162	022701	000001		CMP	#1,X0+1	I IS REMAINDER = 1
011166	001401			BEQ	,+4	
011170	000000			HLT		I REMAINDER IS WRONG

 ITEST 135 DIV 0 52525 / -(3) = 25252 REM = 1 PS = 0

011172	010701			SCOPE		I TEST OF DIVIDE
011174	012700	000000		MOV	#0,X0	I LOAD HIGH ORDER WITH 0
011200	012701	052525		MOV	#52525,X0+1	I LOAD LOW ORDER WITH 52525
011204	071043			DIV	-(3),X0	I DIVIDE BY -(3)
011206	013767	177776	000406	MOV	#PS,PSW	I SAVE PS
011214	122767	000000	000400	CMPB	#0,PSW	I IS PS = 0
011222	001401			BEQ	,+4	
011224	000000			HLT		I PS IS WRONG
011226	022700	025252		CMP	#25252,X0	I IS QUOTIENT = 25252
011232	001401			BEQ	,+4	
011234	000000			HLT		I QUOTIENT IS WRONG
011236	022701	000001		CMP	#1,X0+1	I IS REMAINDER = 1
011242	001401			BEQ	,+4	
011244	000000			HLT		I REMAINDER IS WRONG

 ITEST 136 DIV 0 52525 / 2(4) = 25252 REM = 1 PS = 0

011246	010701			SCOPE		I TEST OF DIVIDE
011250	012700	000000		MOV	#0,X0	I LOAD HIGH ORDER WITH 0
011254	012701	052525		MOV	#52525,X0+1	I LOAD LOW ORDER WITH 52525
011260	071064	000002		DIV	2(4),X0	I DIVIDE BY 2(4)
011264	013767	177776	000330	MOV	#PS,PSW	I SAVE PS
011272	122767	000000	000322	CMPB	#0,PSW	I IS PS = 0
011300	001401			BEQ	,+4	
011302	000000			HLT		I PS IS WRONG
011304	022700	025252		CMP	#25252,X0	I IS QUOTIENT = 25252
011310	001401			BEQ	,+4	
011312	000000			HLT		I QUOTIENT IS WRONG
011314	022701	000001		CMP	#1,X0+1	I IS REMAINDER = 1
011320	001401			BEQ	,+4	
011322	000000			HLT		I REMAINDER IS WRONG

 ;TEST 137 DIV 0 52525 / 0(4) = 25252 REM = 1 PS = 0

011324	010701			SCOPE		TEST OF DIVIDE
011326	012700	000000		MOV	#0,%0	LOAD HIGH ORDER WITH 0
011332	012701	052525		MOV	#52525,%0+1	LOAD LOW ORDER WITH 52525
011336	071074	000000		DIV	0(4),%0	DIVIDE BY 0(4)
011342	013767	177776	000252	MOV	0#PS,PSW	SAVE PS
011350	122767	000000	000244	CMPB	#0,PSW	IS PS = 0
011356	001401			BEQ	,+4	
011360	000000			HLT		PS IS WRONG
011362	022700	025252		CMF	#25252,%0	IS QUOTIENT = 25252
011366	001401			BEQ	,+4	
011370	000000			HLT		QUOTIENT IS WRONG
011372	022701	000001		CMF	#1,%0+1	IS REMAINDER = 1
011376	001401			BEQ	,+4	
011400	000000			HLT		REMAINDER IS WRONG

 ;TEST 140 DIV 0 52525 / 0(4)+ = 25252 REM = 1 PS = 0

011402	010701			SCOPE		TEST OF DIVIDE
011404	012700	000000		MOV	#0,%0	LOAD HIGH ORDER WITH 0
011410	012701	052525		MOV	#52525,%0+1	LOAD LOW ORDER WITH 52525
011414	071034			DIV	0(4)+,%0	DIVIDE BY 0(4)+
011416	013767	177776	000176	MOV	0#PS,PSW	SAVE PS
011424	122767	000000	000170	CMPB	#0,PSW	IS PS = 0
011432	001401			BEQ	,+4	
011434	000000			HLT		PS IS WRONG
011436	022700	025252		CMF	#25252,%0	IS QUOTIENT = 25252
011442	001401			BEQ	,+4	
011444	000000			HLT		QUOTIENT IS WRONG
011446	022701	000001		CMF	#1,%0+1	IS REMAINDER = 1
011452	001401			BEQ	,+4	
011454	000000			HLT		REMAINDER IS WRONG

 ;TEST 141 DIV 0 52525 / 0(4) = 25252 REM = 1 PS = 0

011456	010701			SCOPE		TEST OF DIVIDE
011460	012700	000000		MOV	#0,%0	LOAD HIGH ORDER WITH 0
011464	012701	052525		MOV	#52525,%0+1	LOAD LOW ORDER WITH 52525
011470	071054			DIV	0(4),%0	DIVIDE BY 0(4)
011472	013767	177776	000122	MOV	0#PS,PSW	SAVE PS
011500	122767	000000	000114	CMPB	#0,PSW	IS PS = 0
011506	001401			BEQ	,+4	
011510	000000			HLT		PS IS WRONG
011512	022700	025252		CMF	#25252,%0	IS QUOTIENT = 25252
011516	001401			BEQ	,+4	
011520	000000			HLT		QUOTIENT IS WRONG
011522	022701	000001		CMF	#1,%0+1	IS REMAINDER = 1
011526	001401			BEQ	,+4	
011530	000000			HLT		REMAINDER IS WRONG
011532	005267	167242		INC	ICNT	
011536	016737	167236	177570	MOV	ICNT,0#DISPLAY	
011544	022767	020000	167226	CMF	#20000,ICNT	
011552	001402			BEQ	,+6	
011554	000167	167222		JMP	BEG	
011560	005067	167214		CLR	ICNT	
011564	105737	177564		TSTB	0#177564	
011570	100375			BPL	,+4	
011572	112737	000007	177566	MOVSB	#7,0#177566	
011600	013700	000042		MOV	0#42,%0	GET MONITOR RETURN ADDRESS
011604	001404			BEQ	1\$	SKIP IF NONE
011606	004710			JSR	7,(0)	GO BACK TO THE MONITOR
011610	000240			NOP		
011612	000240			NOP		
011614	000240			NOP		
011616	000137	000200	1\$1	JMP	0#200	RESTART THE PROGRAM
011622	000000			PSW:	0	
011624	177776			S0:	-2	
011626	000002			S1:	2	
011630	011620			S2:	S1	
011632	000002			S3:	2	

000001 ,END

BEG	001002	DISP_A	= 177570	DUMMY	= 000000	HLT	= 000000
ICNT	001000	M	= 000006	N	= 000142	PC	=X000007
PS	= 177776	PSW	011622	SCOPE	= 010701	SP	=X000006
SWR	= 177570	S0	011624	S1	011626	S2	011630
S3	011632	.	= 011634				

ERRORS DETECTED: 0