623-0100-0

CODING FORM

PROBLEM 1 Solution

CODER | DATE | PAGE OF

LOCATION	CL	OP	M	C, I	ADDRESS	I	J	ADDRESS P	L	B	OFF	I	REMARKS
		CN		0011	8.10				54	8	74		
		CN		0011	9				64	8	10		
		CN		0000	#0				10	8	0		

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CODING FORM

PROBLEM 2 Decimal Multiplication Solution

CODER | DATE | PAGE OF

LOCATION	CL	OP	M	C, I	ADDRESS	I	J	ADDRESS P	L	B	OFF	I	REMARKS
	D	CV			1900				30	6	8		
	D	CVTR			1900.36				30	6	--		
	B	MPY			15				64	4	8		1.
	B	CVAD			----				--	-	0		2.
	D	S			2000				54	6	0		

1. The offset of the CV and the MPY instructions should be the same. A byte size of four is used in MPY because of the four-bit sign byte in the transit register.

2. CVAD is used instead of CVA because of the offset of 20 produced by the MPY instruction.

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PROBLEM 3 Solution

CODER | DATE | PAGE OF

LOCATION	CL	OP	M	C, I	ADDRESS	I	J	ADDRESS P	L	B	OFF	I	REMARKS
		LX			#0		4						
		LX			CW1		3						
		LV			ST		2						
HERE		KC			18		3						
		BIN	F	XL	FINI								
		TMT			A	4	3			0		3	
	B	L	U		19,28				18	4	0		
	B	AM	UN		18				18	4	0		
	B	AM	U		20				18	4	0		
		R			19								
		B			HERE								
FINI		LC			18		4						
		TMT			A	4	4			0		3	
		W											
CW1		B1			C1				CW2				
CW2		B2			C2				CW3				
CW3		B3			C3				CW4				
⋮		⋮			⋮				⋮				
ST		N											

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CODING FORM

PROBLEM 4 Solution

CODER | DATE | PAGE OF

LOCATION	CL	OP	M	C, I	ADDRESS	I	J	ADDRESS P	L	B	OFF	I	REMARKS
INTAD + 25		SICI			ADN								
		BDS			INT ROT								
INT ROT		TMT			7		#2		TEM STORE				Save the LZC & AOC counts
ADN		LV	N		# ( )		14						Put minus Instruction Counter in ~~V.F. of X14~~
		LVE			.32	14	15						Put Effect. Add of SRT instr. in V.F. of X15
		CNM		1111	.61	15			2	0	0		Set Data Flags T & U to one
		TMT			TEM STORE		#2		7				Restore original LZC & AOC
		BEN			0	14							
		An Alternative Scheme											
INT ROT		TMT			7		#3		TEM STORE				
		LV			ADN								
		I	N		#.32		14						
		LVE			0	14	15						
	B	L	U		#11				2	3	0		
	B	S	U		.61	15			2	3	0		
		TMT			TEM STORE		#3		7				
		BEN			0	14							
ADN		(	)										