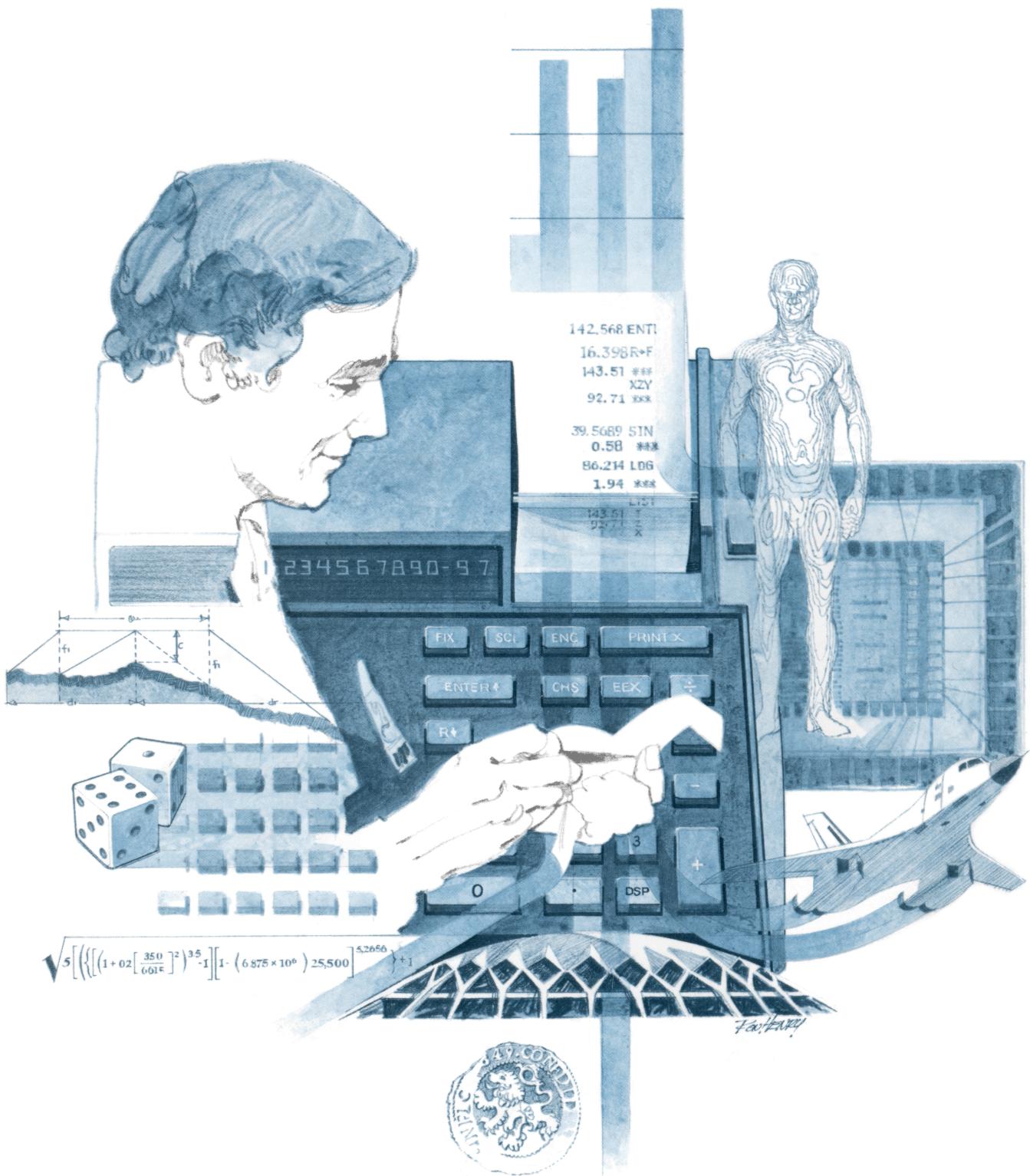


HEWLETT-PACKARD

# HP-67/HP-97

# Users' Library Solutions

## 1978 Taxes





## INTRODUCTION

In an effort to provide continued value to its customers, Hewlett-Packard is introducing a unique service for the HP fully programmable calculator user. This service is designed to save you time and programming effort. As users are aware, Programmable Calculators are capable of delivering tremendous problem solving potential in terms of power and flexibility, but the real genie in the bottle is program solutions. HP's introduction of the first handheld programmable calculator in 1974 immediately led to a request for program **solutions** — hence the beginning of the HP-65 Users' Library. In order to save HP calculator customers time, users wrote their own programs and sent them to the Library for the benefit of other program users. In a short period of time over 5,000 programs were accepted and made available. This overwhelming response indicated the value of the program library and a Users' Library was then established for the HP-67/97 users.

To extend the value of the Users' Library, Hewlett-Packard is introducing a unique service — a service designed to save you time and money. The Users' Library has collected the best programs in the most popular categories from the HP-67/97 and HP-65 Libraries. These programs have been packaged into a series of low-cost books, resulting in substantial savings for our valued HP-67/97 users.

We feel this new software service will extend the capabilities of our programmable calculators and provide a great benefit to our HP-67/97 users.

## A WORD ABOUT PROGRAM USAGE

Each program contained herein is reproduced on the standard forms used by the Users' Library. Magnetic cards are not included. The Program Description I page gives a basic description of the program. The Program Description II page provides a sample problem and the keystrokes used to solve it. The User Instructions page contains a description of the keystrokes used to solve problems in general and the options which are available to the user. The Program Listing I and Program Listing II pages list the program steps necessary to operate the calculator. The comments, listed next to the steps, describe the reason for a step or group of steps. Other pertinent information about data register contents, uses of labels and flags and the initial calculator status mode is also found on these pages. Following the directions in your HP-67 or HP-97 **Owner's Handbook and Programming Guide**, "Loading a Program" (page 134, HP-67; page 119, HP-97), key in the program from the Program Listing I and Program Listing II pages. A number at the top of the Program Listing indicates on which calculator the program was written (HP-67 or HP-97). If the calculator indicated differs from the calculator you will be using, consult Appendix E of your **Owner's Handbook** for the corresponding keycodes and keystrokes converting HP-67 to HP-97 keycodes and vice versa. No program conversion is necessary. The HP-67 and HP-97 are totally compatible, but some differences do occur in the keycodes used to represent some of the functions.

A program loaded into the HP-67 or HP-97 is not permanent — once the calculator is turned off, the program will not be retained. You can, however, permanently save any program by recording it on a blank magnetic card, several of which were provided in the Standard Pac that was shipped with your calculator. Consult your **Owner's Handbook** for full instructions. A few points to remember:

The Set Status section indicates the status of flags, angular mode, and display setting. After keying in your program, review the status section and set the conditions as indicated before using or permanently recording the program.

**REMEMBER!** To save the program permanently, **clip** the corners of the magnetic card once you have recorded the program. This simple step will protect the magnetic card and keep the program from being inadvertently erased.

As part of HP's continuing effort to provide value to our customers, we hope you will enjoy our newest concept.

## IMPORTANT

### 1978

Although references are made throughout this book to 1977, the tables and calculations apply equally well to your 1978 tax returns.

### Pre-recorded Cards

It is possible to purchase pre-recorded cards for all of the programs in this book. They can be purchased from the HP Users' Library for \$2.00 apiece (plus tax). When ordering a program card, list the Users' Library program name and number. Specify **card only**.



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# Program Description I

1

Program Title      Income Tax Planning - I

Contributor's Name      Richard D. Rutter

Address      Arthur Young & Co.      780 N. Water St.

City      Milwaukee

State      Wi

Zip Code      53202

**Program Description, Equations, Variables**      This program calculates regular, alternative, and average income taxes for individuals using IRS forms 1040, schedule D, and schedule G. Although the program was originally written prior to the Tax Reduction and Simplification Act of 1977 (which effects 1977 returns) the changes in the law have only had a minor effect on the program results. The tax amount computed for ordinary income differs slightly from that arrived at through the use of Table A through D (adjusted incomes less than \$20,000 (\$40,000 for joint returns)) but the differences are well within the tolerances required for tax planning. For filing purposes, the new tables (A through D) should be used for calculating ordinary income wherever specified by the IRS. If schedule x, y, and z are specified for tax computation, however, the program answers are exact.

The following mnemonics are in the accompanying documentation

OTI = Form 1040 Line 34

- (exemptions x 750)

- 3200 Joint

or

1600 Separate

or

2200 Single

-(.5 x C G)

C G = Capital Gains (Schedule D, line 13)

4 yr TI = Total Taxable income for preceding 4 years (see next page)

Computed tax amounts do not include the income tax credit. For the exact net tax amount, use the program Tax Computation Schedule and the tax on ordinary income generated by this program.

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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# Program Description I

**Program Title**

**Contributor's Name**

**Address**

**City**

**State**

**Zip Code**

## **Program Description, Equations, Variables**

4 Yr TI - The increase in personal exemption for the current year (1977) has resulted in an increase in the 4 year base period total as implemented in the new income averaging schedule G. The effect is an increase in the averaged tax of approximately .5%. For planning purposes this is not a significant amount. However, if the exact income averaged tax is desired, add the following amounts to the 4 year taxable income.

+ \$2133 Joint

or

+ \$1067 Separate

or

+ \$1467 Single

## **Operating Limits and Warnings**

Tax calculations cannot be performed for values less than \$1,000 (if attempted, error code '9' will flash in the display). All input data must conform with the following limits:  $OTI \geq \$1,000$

$CG > 0$

$4 \text{ yr TI} > 0$

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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# Program Description II

3

## Sketch(es)

(See attached flowchart)

## Sample Problem(s)

Mr. and Mrs. Smith will file a joint return claiming 2 exemptions for tax year 1977. The following data are applicable.

1040 Line 34	100,000
Capital Gains (CG)	10,000
4 Year TI	160,000

2.00 GSBA	
100000.00 ENT↑	line 34
750.00 ENT↓	
2.00 X	
1500.00 ***	net exemption
-	

98500.00 ***	standard deduction
3200.00 -	
95300.00 ***	

10000.00 STOD	capital gains
---------------	---------------

2.00 ÷	
-	
90300.00 ***	-1/2 C G
STOB	OTI

160000.00 STOD	4 yr TI
GSBE	

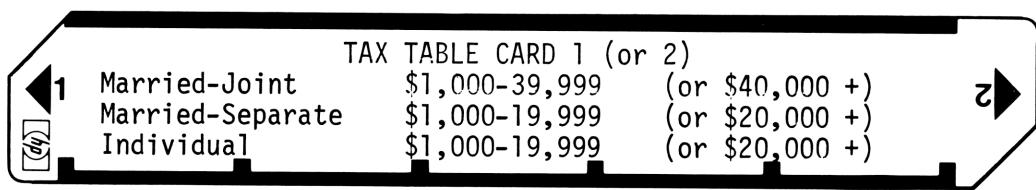
3.00 T	regular
42360.00 Z	
41860.00 Y	alternative
40529.00 X	averaged

## Reference(s)

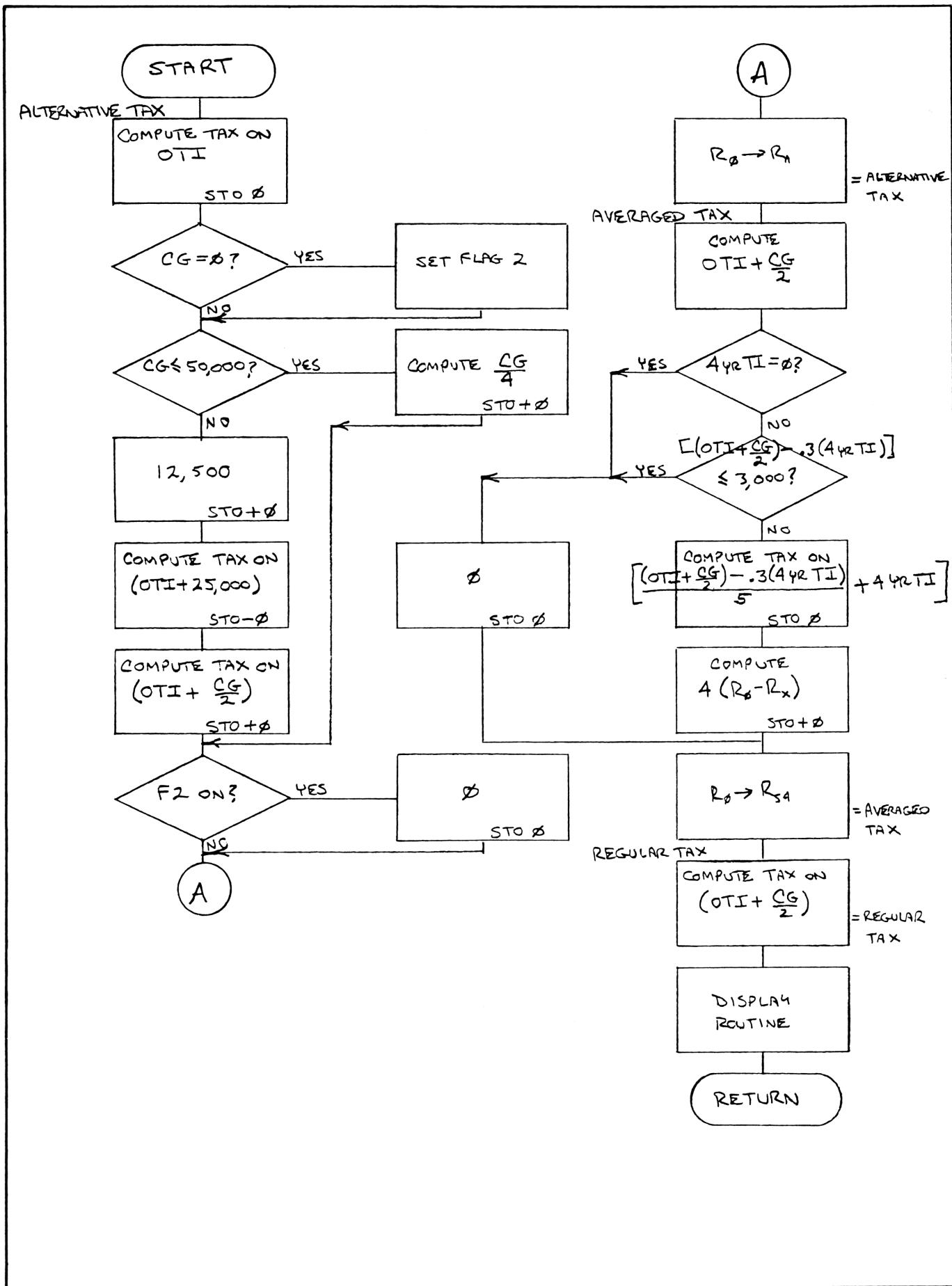
# User Instructions



# User Instructions



STEP	INSTRUCTIONS			INPUT DATA/UNITS	KEYS	OUTPUT DATA/UNITS
1.	Record the following data on pairs of data cards for use with Income Tax Planning I and II programs. Record only the Tax Table(s) that you will use.					
	REG	MARRIED-JOINT	MARRIED-SEPARATE	INDIVIDUAL		
		CARD 1				
	R0	1.0401	1.0201	1.0201	STO     0	
	R1	1.0001415	0.	0.	STO     1	
	R2	2.0002916	0.	0.	STO     2	
	R3	3.0004517	1.0001416	1.0001416	STO     3	
	R4	4.0006219	2.0003119	2.0003119	STO     4	
	R5	8.0013822	4.0006922	4.0006921	STO     5	
	R6	12.0022625	6.0011325	6.0011124	STO     6	
	R7	16.0032628	8.0016328	8.0015925	STO     7	
	R8	20.0043832	10.0021932	10.0020927	STO     8	
	R9	24.0056636	12.0028336	12.0026329	STO     9	
	R 0	28.0071039	14.0035539	14.0032131	P S	
	R 1	32.0086642	16.0043342	16.0038334	STO     0	
	R 2	36.0103445	18.0051745	18.0045136	STO     1	
	R 3	52000.	26000.	38000.	STO     2	
		CARD 2			STO     3	
	R0	2.0402	2.0202	2.0202	P S   W/DATA	
	R1	40.0121448	20.0060748	20.0052338	STO     0	
	R2	44.0140650	22.0070350	22.0059940	STO     1	
	R3	52.0180653	26.0090353	26.0075945	STO     2	
	R4	64.0244255	32.0122155	32.0102950	STO     3	
	R5	76.0310258	38.0155158	38.0132955	STO     4	
	R6	88.0379860	44.0189960	44.0165960	STO     5	
	R7	100.0451862	50.0225962	50.0201962	STO     6	
	R8	120.0575864	60.0287964	60.0263964	STO     7	
	R9	140.0703866	70.0351966	70.0327966	STO     8	
	R 0	160.0835868	80.0417968	80.0393968	STO     9	
	R 1	180.0971869	90.0485969	90.0461969	P S	
	R 2	200.1109870	100.0554970	100.0530970	STO     1	
	R 3	52000.	26000.	38000.	STO     2	
					STO     3	
					P S   W/DATA	



# 97 Program Listing I

7

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	*LBL0	21 00		057	LSTX	16-63	
002	EEX	-23		058	ST00	35 00	
003	3	03	Tax Calculation Subroutine	059	R↓	-31	
004	÷	-24		060	INT	16 34	
005	STOE	35 15	Format Tax Table	061	X=Y?	16-33	
006	1	01	Search Argument	062	GT09	22 09	
007	X≤Y?	16-35	If argument <1	063	R↓	-31	
008	GT06	22 06	Halt with	064	GT03	22 03	
009	9	09	Error code '9'	065	*LBL9	21 09	
010	R/S	51		066	F2?	16 23 02	Exit for initial
011	*LBL6	21 06	Determine which	067	RTN	24	Tax Table Load
012	RCLI	36 46	half of tax table	068	*LBL5	21 05	
013	FRC	16 44	is required by	069	RCLI	36 46	Tax Table Search
014	EEX	-23	comparing argument	070	FRC	16 44	Routine
015	3	03	to "Table Split"	071	1	01	
016	x	-35	value stored in	072	2	02	Perform indirect
017	ENT↑	-21	R1 (Frac).	073	+	-55	read loop through
018	INT	16 34		074	STOI	35 46	Tax Table
019	RCLE	36 15		075	*LBL7	21 07	(Descending) until
020	X≠Y	-41	Request the other	076	RCLE	36 15	correct entry is
021	X>Y?	16-34	half of the Tax	077	RCLI	36 45	found. Then branch
022	GT01	22 01	Table ('1' or '2')	078	INT	16 34	to tax calculation
023	2	02	if necessary, and	079	X≤Y?	16-35	routine.
024	GT08	22 12	branch to Tax	080	GT08	22 08	
025	*LBL1	21 01	Table load routine	081	DSZI	16 25 46	
026	1	01	Else, branch to Tax	082	GT07	22 07	
027	*LBLB	21 12	Table Search	083	*LBL8	21 08	Tax Calculation
028	R↑	16-31	routine	084	RCLI	36 45	Routine
029	FRC	16 44		085	FRC	16 44	
030	EEX	-23		086	EEX	-23	
031	1	01		087	5	05	
032	x	-35		088	x	-35	
033	INT	16 34		089	ENT↑	-21	
034	X=Y?	16-33		090	INT	16 34	
035	GT05	22 05		091	EEX	-23	
036	R↓	-31		092	1	01	
037	GT03	22 03		093	x	-35	
038	*LBLA	21 11	Entry for initial	094	X≠Y	-41	
039	SF2	16 21 02	Tax Table load	095	FRC	16 44	
040	*LBL3	21 03		096	RCLE	36 15	
041	RCLB	36 00	Tax Table Load	097	RCLI	36 45	
042	ABS	16 31	Routine	098	INT	16 34	
043	R↓	-31		099	-	-45	
044	1	01	Requested card	100	EEX	-23	
045	3	03	Code ('1' or '2')	101	3	03	
046	STOI	35 46	is in R <sub>x</sub> . Loop	102	x	-35	
047	X≠Y	-41	until requested	103	x	-35	
048	*LBL2	21 02	half of Tax Table	104	+	-55	
049	MRG	16-62	is loaded.	105	RTN	24	
050	PSE	16 51		106	*LBL6	21 15	
051	F3?	16 23 03	Store 'Table Split'	107	RCLB	36 12	Mainline
052	GT04	22 04	value in R <sub>1</sub> (Frac)	108	GSE0	23 00	Calculate Alternative
053	GT02	22 02		109	ST00	35 00	Tax
054	*LBL4	21 04		110	5	05	Compute Tax on OTI
055	RCLB	36 00		111	EEX	-23	Store in R <sub>0</sub> .
056	STOI	35 46		112	4	04	

## REGISTERS

0 Accum.	1 Tax	2	3	4	5	6	7	8	9	>
Tax Amt	Table	-	-	-	-	-	-	-	-	
S0 Tax	S1	S2	S3 Constant	S4 Ave Tax	S5	S6	S7	S8	S9 Work	
Table	-	-	-	38/26/52000	-	-	-	-	-	
A Alt. Tax	B OTI	C C G	D 4 YR TI	E Work	F	G	H	I Loop Control( Int )	J Table Split(Frac)	K

# 97 Program Listing II

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
113	RCLC	36 13		169	RCLD	36 14	Compute tax on 4YR TI
114	X=0?	16-43	If CG = 0	170	GSB0	23 00	Leave in R <sub>X</sub>
115	SF2	16 21 02	Set Flag 2	171	RCL0	36 00	Compute 4 (R <sub>0</sub> -R <sub>X</sub> )
116	X≤Y?	16-35	If CG < 50000	172	X≠Y	-41	
117	GTOc	22 16 13	Branch to LBL c	173	-	-45	Add to R <sub>0</sub>
118	X≠Y	-41	If C G 50000	174	4	04	
119	4	04	Add 12500 To R <sub>0</sub>	175	X	-35	
120	÷	-24		176	ST+0	35-55 00	
121	ST+0	35-55 00		177	GTOa	22 16 11	
122	2	02	Compute Tax on	178	*LBLb	21 16 12	Leave 0 in R <sub>0</sub>
123	x	-35	(OTI + 25000)	179	0	00	
124	RCLB	36 12	Subtract from R <sub>0</sub>	180	ST00	35 00	
125	+	-55		181	*LBLa	21 16 11	Store
126	GSB0	23 00		182	RCL0	36 00	Averaged Tax
127	ST-0	35-45 00		183	P±S	16-51	in R <sub>54</sub>
128	RCLB	36 12	Compute Tax on	184	ST04	35 04	
129	RCLC	36 13	(OTI + $\frac{CG}{2}$ )	185	P±S	16-51	
130	2	02		186	RCLD	36 14	Restore 4 YR TI
131	÷	-24	Branch to LBL d	187	.	-62	in R <sub>0</sub>
132	+	-55		188	3	03	
133	GSB0	23 00		189	÷	-24	
134	GTOd	22 16 14		190	ST0D	35 14	
135	*LBLc	21 16 13	If CG 50000	191	RCLB	36 12	Calculate
136	4	04	Compute CG	192	RCLC	36 13	Regular Tax
137	÷	-24	$\frac{4}{4}$	193	2	02	Compute Tax on
138	*LBLd	21 16 14	Add (Tax on OTI+ $\frac{CG}{2}$ )	194	÷	-24	(OTI + $\frac{CG}{2}$ )
139	ST+0	35-55 00		195	+	-55	Leave in R <sub>X</sub>
140	RCL0	36 00	or ( $\frac{CG}{4}$ ) to R <sub>0</sub>	196	GSB0	23 00	Display
141	F2?	16 23 02		197	3	03	'3.00'
142	0	00	If CG=0, Alt. Tax=0	198	X≠Y	-41	'Regular Tax'
143	ST0A	35 11	Store Alt.Tax in R <sub>A</sub>	199	RCLA	36 11	'Alternative Tax'
144	RCLB	36 12	Calculate income	200	P±S	16-51	'Averaged Tax'
145	RCLC	36 13	averaged tax	201	RCL4	36 04	
146	2	02	Calculate OTI+ $\frac{CG}{2}$	202	P±S	16-51	
147	÷	-24		203	PRST	16-14	
148	+	-55		204	RTN	24	
149	RCLD	36 14	If 4 Yr TI=0	205	R/S	51	
150	X=0?	16-43	Branch to LBL b				
151	GTOb	22 16 12					
152	.	-62	Compute .3(4Yr TI)				
153	3	03	Store in R <sub>A</sub>				
154	x	-35					
155	ST0D	35 14					
156	-	-45	If (OTI+ $\frac{CG}{2}$ ) -				
157	3	03	.3(4YR TI)				
158	EEX	-23	< 3000				
159	3	03	Branch to LBL b				
160	X≠Y	-41					
161	X≤Y?	16-35					
162	GTOb	22 16 12	Compute Tax on				
163	5	05					
164	÷	-24	[ (OTI+ $\frac{CG}{2}$ - .3(4YRTI))	220			
165	RCLD	36 14					
166	+	-55	5				
167	GSB0	23 00	+ 4 YR TI]				
168	ST00	35 00	Store in R <sub>0</sub>				

**LABELS**

LABELS					FLAGS		SET STATUS		
A	B	C	D	E	0	1	FLAGS	TRIG	DISP
a	177	b 174	c 131	d 134	e	1	ON OFF	DEG	FIX
0	001	1 025	2 045	3 040	4 051	2 Used	0 <input type="checkbox"/> <input checked="" type="checkbox"/>	GRAD <input type="checkbox"/>	SCI <input type="checkbox"/>
5	064	6 011	7 071	8 079	9 058	3	2 <input type="checkbox"/> <input checked="" type="checkbox"/>	RAD <input type="checkbox"/>	ENG <input type="checkbox"/>
							3 <input type="checkbox"/> <input checked="" type="checkbox"/>	n 2	

# Program Description I

Program Title Federal Income Tax - Single, Tax Table A

Contributor's Name Howard B. Kutner, CPA

Address 370 Lexington Avenue

City New York

State New York

Zip Code 10017

## Program Description, Equations, Variables

This program is for use in 1977 and later and will find the tax for a single taxpayer corresponding to the various brackets of income in tables published by the Internal Revenue Service. It is for use with incomes of less than \$20,000 and incorporates the zero bracket amount, the deduction for exemptions and the general tax credit. The top tax Rate (incremental rate) may be determined by pressing a single key after determining the tax - (this feature is virtually impossible when using the government tables)

See Users' Library Program Number 00264-D for Formulae and Table of Contents

## Operating Limits and Warnings

Taxable Income is limited to \$20,000. However, the program has no limit on the number of exemptions although the Internal Revenue Service requires a detailed calculation when the number of exemptions exceeds that provided in the published tables.

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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## **Program Description II**

## **Sketch(es)**

## **Sample Problem(s)**

Find the appropriate tax for each case and the Tax Rate on the Top Bracket

	Exemptions	Income
a)	1	\$4,702.00
b)	2	8,021.00
c)	3	11,588.00
d)	2	17,569.00
e)	1	19,328.00
f)	2	21,465.00

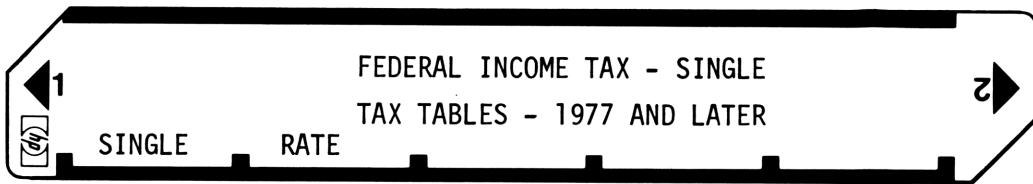
## Solution(s)

- a) 236.00 17%
- b) 672.00 21%
- c) 1,238.00 24%
- d) 2,994.00 29%
- e) 3,778.00 34%
- f) out of limits

## **Reference(s)**

**Internal Revenue Service Form 1040 and Instructions for 1977.**

# User Instructions



# 97 Program Listing I

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	*LBLA	21 11		057	-	-45	
002	2	02		058	X>Y?	16-34	
003	0	00		059	GT01	22 01	
004	EEX	-23		060	1	01	
005	3	03		061	6	06	
006	X≥Y	-41		062	ST02	35 02	
007	X>Y?	16-34		063	3	03	
008	N!	16 52		064	4	04	
009	EEX	-23		065	ST04	35 04	
010	2	02		066	1	01	
011	÷	-24		067	6	06	
012	DSP0	-63 00		068	1	01	
013	RND	16 24		069	ST06	35 06	
014	LSTX	16-63		070	GT0e	22 16 15	
015	INT	16 34		071	*LBL0	21 00	
016	ST00	35 00		072	CLX	-51	
017	-	-45		073	6	06	
018	.	-62		074	X>Y?	16-34	
019	2	02		075	GT00	22 00	
020	5	05		076	CLX	-51	
021	-	-45		077	8	08	
022	ABS	16 31		078	ST02	35 02	
023	RCL0	36 00		079	X≤Y?	16-35	
024	+	-55		080	GT01	22 01	
025	7	07		081	CLX	-51	
026	5	05		082	2	02	
027	0	00		083	4	04	
028	R/S	51		084	x	-35	
029	ST08	35 08		085	3	03	
030	%	55		086	3	03	
031	X≥Y	-41		087	*LBLa	21 16 11	
032	R↓	-31		088	LSTX	16-63	
033	-	-45		089	ST09	35 09	
034	.	-62		090	R↓	-31	
035	1	01		091	GT03	22 03	
036	x	-35		092	*LBL1	21 01	
037	2	02		093	2	02	
038	.	-62		094	ST÷4	35-24 04	
039	2	02		095	4	04	
040	-	-45		096	1	01	
041	ST01	35 01		097	GT0e	22 16 15	
042	2	02		098	*LBL0	21 00	
043	ST03	35 03		099	CLX	-51	
044	ST05	35 05		100	2	02	
045	CLX	-51		101	ST02	35 02	
046	5	05		102	X>Y?	16-34	
047	0	00		103	GT00	22 00	
048	ST04	35 04		104	1	01	
049	ST02	35 02		105	9	09	
050	X>Y?	16-34		106	ST04	35 04	
051	CLX	-51		107	7	07	
052	1	01		108	GT0e	22 16 15	
053	6	06		109	*LBL0	21 00	
054	X>Y?	16-34		110	1	01	
055	GT00	22 00		111	4	04	
056	8	08					
REGISTERS 112							
0 Used	1 i	2 i <sub>1</sub>	3 Δi	4 R <sub>1</sub>	5 ΔR	6 T <sub>1</sub>	7 N
S0	S1	S2	S3	S4	S5	S6	S7
A	B	C	D	E	I		S8 S9

0 Used	1 i	2 i <sub>1</sub>	3 Δi	4 R <sub>1</sub>	5 ΔR	6 T <sub>1</sub>	7 N	8 # Exemptions	9 RATE
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A	B	C	D	E	I				

# 97Program Listing II

13

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
113	1	01		169	R↓	-31	
114	ST05	35 05		170	3	03	
115	.	-62		171	5	05	
116	5	05		172	RCL8	36 08	
117	ST03	35 03		173	X	-35	
118	0	00		174	X>Y?	16-34	
119	ST02	35 02		175	X≥Y	-41	
120	*LBL#	21 16 15		176	R↓	-31	
121	RCL1	36 01		177	-	-45	
122	RCL2	36 02		178	DSP0	-63 00	
123	-	-45		179	RND	16 24	
124	RCL3	36 03		180	DSP2	-63 02	
125	÷	-24		181	RTN	24	
126	INT	16 34		182	*LBLB	21 12	
127	ST07	35 07		183	DSP0	-63 00	
128	X²	53		184	RCL9	36 09	
129	LSTX	16-63		185	RTN	24	
130	+	-55		186	R/S	51	
131	2	02					
132	÷	-24					
133	RCL3	36 03					
134	X	-35					
135	RCL5	36 05					
136	X	-35					
137	RCL7	36 07					
138	RCL2	36 02					
139	X	-35					
140	RCL5	36 05					
141	X	-35					
142	+	-55					
143	+	-55					
144	RCL4	36 04					
145	RCL7	36 07					
146	RCL5	36 05					
147	X	-35					
148	+	-55					
149	ST09	35 09					
150	RCL1	36 01					
151	X	-35					
152	R↑	16-31					
153	*LBL3	21 03					
154	-	-45					
155	1	01					
156	0	00					
157	X	-35					
158	X<0?	16-45					
159	CLX	-51					
160	RCL1	36 01					
161	2	02					
162	0	00					
163	X	-35					
164	1	01					
165	8	08					
166	0	00					
167	X≤Y?	16-35					
168	X≥Y	-41					

## LABELS

## FLAGS

## SET STATUS

A	SINGLE	B	RATE	C	D	E	0	FLAGS	TRIG	DISP
a	CALC.	b		c	d	e	1	ON OFF	DEG	FIX
0	SKIP	1	SKIP	2	3	FINISH	4	USED	GRAD	SCI
5		6		7	8		9		RAD	ENG

n 2

# Program Description I

Program Title     Federal Income Tax - Joint or Separate, Tax Tables B & C

Contributor's Name Howard B. Kutner, CPA

Address     370 Lexington Avenue

City     New York

State     New York

Zip Code     10017

## Program Description, Equations, Variables

This program is for use in 1977 and later and will find the tax for a married taxpayer filing either joint or separate returns corresponding to the various brackets of income in tables published by the Internal Revenue Service. It is for use with incomes of less than \$20,000 (\$40,000 for joint returns) and incorporates the zero bracket amount, the deduction for exemptions and the general tax credit. The top Tax rate (incremental rate) may be determined by pressing a single key after determining the Tax - (this feature is virtually impossible when using the government Tables)

See User Library Program # 00303-D for Formulae and Table of Contents

## Operating Limits and Warnings

Taxable Income is limited to 20,000 (40,000 if joint). However, the program has no limit on the number of exemptions although Internal Revenue requires a detailed calculation when the number of exemptions exceeds that provided in the published Tables.

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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## **Program Description II**

## **Sketch(es)**

**Sample Problem(s)** Find the appropriate tax for each case and the Tax Rate on the top bracket.

	<u>Joint</u>		<u>Separate</u>
Exemptions	Income	Exemptions	Income
a) 2	8,148.00	a) 1	3,929.00
b) 6	21,404.00	b) 2	8,782.00
c) 4	28,267.00	c) 3	15,098.00
d) 5	37,528.00	d) 2	18,836.00
e) 7	9,782.00	e) 1	22,175.00
		f) 3	4,372.00

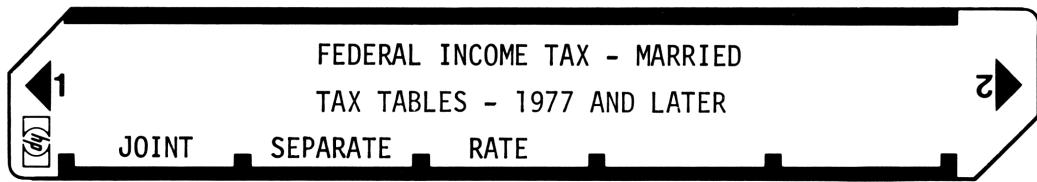
<b>Solution(s)</b>	a)	452.00	17%	a)	203.00	17%
	b)	2,481.00	25%	b)	989.00	22%
	c)	4,864.00	32%	c)	2,477.00	32%
	d)	7,926.00	39%	d)	4,153.00	39%
*	e)	0.00	15%	e)	Out of limits	
	* f)	0.00	15%			

\* Note: The existence of a Tax Rate despite no tax is explained by the fact that the tax is eliminated by the general tax credit.

## Reference(s)

**Internal Revenue Service Form 1040 and Instructions for 1977.**

# User Instructions



# 97 Program Listing I

17

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	*LBLB	21 12		057	RTN	24	
002	2	02		058	*LBL0	21 00	
003	0	00		059	CLX	-51	
004	EEX	-23		060	2	02	
005	3	03		061	X>Y?	16-34	
006	X#Y	-41		062	GT00	22 00	
007	X>Y?	16-34		063	ST02	35 02	
008	N!	16 52		064	3	03	
009	SF2	16 21 02		065	ST05	35 05	
010	GSBS	23 05		066	1	01	
011	*LBL4	21 04		067	9	09	
012	1	01		068	ST04	35 04	
013	.	-62		069	7	07	
014	6	06		070	GT0e	22 16 15	
015	-	-45		071	*LBL0	21 00	
016	ST01	35 01		072	1	01	
017	2	02		073	4	04	
018	ST03	35 03		074	ST04	35 04	
019	CLX	-51		075	1	01	
020	i	01		076	ST05	35 05	
021	0	00		077	.	-62	
022	X>Y?	16-34		078	5	05	
023	GT00	22 00		079	ST03	35 03	
024	2	02		080	CLX	-51	
025	+	-55		081	ST02	35 02	
026	X>Y?	16-34		082	*LBL4	21 16 15	
027	GT01	22 61		083	RCL1	36 01	
028	ST02	35 02		084	RCL2	36 02	
029	3	03		085	-	-45	
030	ST05	35 05		086	RCL3	36 03	
031	x	-35		087	÷	-24	
032	ST04	35 04		088	INT	16 34	
033	1	01		089	ST07	35 07	
034	4	04		090	X <sup>2</sup>	53	
035	9	09		091	LSTX	16-63	
036	GT0e	22 16 15		092	+	-55	
037	*LBL1	21 01		093	2	02	
038	CLX	-51		094	÷	-24	
039	3	03		095	RCL3	36 03	
040	2	02		096	x	-35	
041	x	-35		097	RCL5	36 05	
042	1	01		098	x	-35	
043	0	00		099	RCL7	36 07	
044	1	01		100	RCL2	36 02	
045	*LBL4	21 16 11		101	x	-35	
046	LSTX	16-63		102	RCL5	36 05	
047	ST09	35 09		103	x	-35	
048	R4	-31		104	+	-55	
049	-	-45		105	+	-55	
050	1	01		106	RCL4	36 04	
051	0	00		107	RCL7	36 07	
052	x	-35		108	RCL5	36 05	
053	X<0?	16-45		109	x	-35	
054	CLX	-51		110	+	-55	
055	F2?	16 23 02		111	ST09	35 09	
056	GT0e	22 06		112	RCL1	36 01	

REGIS, ETC.

0 Used	1 i	2 i <sub>1</sub>	3 Δi	4 R <sub>1</sub>	5 ΔR	6 T <sub>1</sub>	7 N	8 Exemptions	9 Rate
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A	B	C		D		E		I	

# 97 Program Listing II

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
113	X	-35		169	X <sup>2</sup> Y	-41	
114	R↑	16-31		170	R↓	-31	
115	-	-45		171	3	03	
116	1	01		172	5	05	
117	0	00		173	RCL8	36 08	
118	X	-35		174	X	-35	
119	X<0?	16-45		175	X>Y?	16-34	
120	CLX	-51		176	X <sup>2</sup> Y	-41	
121	F2?	16 23 02		177	R↑	-31	
122	GTOE	22 06		178	-	-45	
123	RTN	24		179	DSP0	-63 00	
124	*LBL6	21 06		180	RND	16 24	
125	3	03		181	DSP2	-63 02	
126	5	05		182	X<0?	16-45	
127	RCL8	36 08		183	CLX	-51	
128	X	-35		184	RTN	24	
129	-	-45		185	*LBL5	21 05	
130	DSP0	-63 00		186	EEX	-23	
131	RND	16 24		187	2	02	
132	DSP2	-63 02		188	÷	-24	
133	X<0?	16-45		189	DSP0	-63 00	
134	CLX	-51		190	RND	16 24	
135	RTN	24		191	LSTX	16-63	
136	*LBLC	21 13		192	INT	16 34	
137	DSP0	-63 00		193	STO0	35 00	
138	RCL9	36 09		194	-	-45	
139	RCL1	36 01		195	.	-62	
140	X<0?	16-45		196	2	02	
141	CLX	-51		197	5	05	
142	X≠0?	16-42		198	-	-45	
143	R↓	-31		199	ABS	16 31	
144	RTN	24		200	RCL0	36 00	
145	*LBLA	21 11		201	+	-55	
146	4	04		202	7	07	
147	0	00		203	5	05	
148	EEX	-23		204	0	00	
149	3	03		205	R/S	51	
150	X <sup>2</sup> Y	-41		206	STO8	35 08	
151	X>Y?	16-34		207	%	55	
152	N!	16 52		208	X <sup>2</sup> Y	-41	
153	GSB5	23 05		209	R↓	-31	
154	2	02		210	-	-45	
155	÷	-24		211	.	-62	
156	GSB4	23 04		212	1	01	
157	2	02		213	X	-35	
158	X	-35		214	RTN	24	
159	RND	16 24		215	R/S	51	
160	RCL1	36 01					
161	4	04					
162	0	00					
163	X	-35					
164	INT	16 34		220			
165	1	01					
166	8	08					
167	0	00					
168	X <sup>2</sup> Y?	16-35					

## LABELS

## FLAGS

## SET STATUS

A Joint	B Separate	C Rate	D	E	0	FLAGS	TRIG	DISP
<sup>a</sup> Calculate	<sup>b</sup>	<sup>c</sup>	<sup>d</sup>	<sup>e</sup> Calculate	1	ON OFF	DEG <input checked="" type="checkbox"/>	FIX <input checked="" type="checkbox"/>
0 Skip	<sup>1</sup> Skip	<sup>2</sup> Skip	3	<sup>4</sup> Used	2	1 <input type="checkbox"/> <input checked="" type="checkbox"/>	GRAD <input type="checkbox"/>	SCI <input type="checkbox"/>
5 Bracket	<sup>6</sup> Finish	7	8	<sup>9</sup> Separate	3	2 <input type="checkbox"/> <input checked="" type="checkbox"/>	RAD <input type="checkbox"/>	ENG <input type="checkbox"/>

n 2

# Program Description I

Program Title Federal Income Tax - Single (Unmarried) Taxpayers (Schedule X)

Contributor's Name Howard B. Kutner, CPA  
 Address 370 Lexington Avenue - Rm 909  
 City New York State New York Zip Code 10017

**Program Description, Equations, Variables** This program utilizes a mathematical formula to represent the Federal Income Tax Table for single (unmarried) Taxpayers. It enables the user to obtain the tax for a given Taxable Income by pressing a single function key. The Top bracket Tax Rate may then be obtained by simply pressing another key.

$$N = \text{INT} \left( \frac{i - i_1}{\Delta i} \right)$$

$$T = iR - D \quad \text{where:} \quad R = .01 (R_1 + N\Delta R)$$

$$D = 10 \left[ \left( \frac{N^2 + N}{2} \right) \Delta R \Delta i + N \Delta R i_1 \right] + T_1$$

TABLE OF CONSTANTS WITHIN VARIOUS BRACKETS OF  $i$  ( $i = \frac{\text{Taxable}}{1000}$ )

range of $i$	$R_1$	$\Delta R$	$i_1$	$\Delta i$	$T_1$	$D$
0 To 2	14	1	0	.5	0	-
2 To 10	19	3	2	2	70	-
10 To 12	32	-	-	-	-	1010
12 To 22	36	3	12	2	1490	-
22 To 26	50	-	-	-	-	3970
26 To 32	53	-	-	-	-	4750
32 To 38	55	-	-	-	-	5390
Operating Limits and Warnings	38 To 50	58	2	38	6	6530
	50 To 90	62	2	50	10	8410
	90 To 100	69	-	-	-	13510
	over 100	70	-	-	-	14510

THIS PROGRAM IS FOR 1977 AND LATER - For incomes less than \$20,000 a different Tax Table may be required.

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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# Program Description II

**Sketch(es)**

## Tax Rate Schedules

**SCHEDULE X—Single Taxpayers Not Qualifying for Rates in Schedule Y or Z**

Use this schedule if you checked Box 1 on Form 1040—

**Sample Problem(s)**

If the amount on Schedule TC, Part I, line 3, is:

Enter on Schedule TC, Part I, line 4:

Not over \$2,200..... —0—

Over—	But not over—		of the amount over—
\$2,200	\$2,700	14%	\$2,200
\$2,700	\$3,200	\$70+15%	\$2,700
\$3,200	\$3,700	\$145+16%	\$3,200
\$3,700	\$4,200	\$225+17%	\$3,700
\$4,200	\$6,200	\$310+19%	\$4,200
\$6,200	\$8,200	\$690+21%	\$6,200
\$8,200	\$10,200	\$1,110+24%	\$8,200
\$10,200	\$12,200	\$1,590+25%	\$10,200
\$12,200	\$14,200	\$2,090+27%	\$12,200
\$14,200	\$16,200	\$2,630+29%	\$14,200
\$16,200	\$18,200	\$3,210+31%	\$16,200
\$18,200	\$20,200	\$3,830+34%	\$18,200
\$20,200	\$22,200	\$4,510+36%	\$20,200
\$22,200	\$24,200	\$5,230+38%	\$22,200
\$24,200	\$28,200	\$5,990+40%	\$24,200
\$28,200	\$34,200	\$7,590+45%	\$28,200
\$34,200	\$40,200	\$10,290+50%	\$34,200
\$40,200	\$46,200	\$13,290+55%	\$40,200
\$46,200	\$52,200	\$16,590+60%	\$46,200
\$52,200	\$62,200	\$20,190+62%	\$52,200
\$62,200	\$72,200	\$26,390+64%	\$62,200
\$72,200	\$82,200	\$32,790+66%	\$72,200
\$82,200	\$92,200	\$39,390+68%	\$82,200
\$92,200	\$102,200	\$46,190+69%	\$92,200
\$102,200	.....	\$53,090+70%	\$102,200

**Solution(s)**
**Reference(s) Internal Revenue Service Form 1040 and Instructions**

This program is for use with Schedule TC, Schedule G, Form 4726 etc. For INCOMES LESS THAN \$20,000 a different Tax Table may be required.

# Program Description II

**Sketch(es)**

Sketch(es) area.

**Sample Problem(s)** Find the Tax and Top Bracket Tax Rate for an unmarried Taxpayer with the following Taxable Incomes:

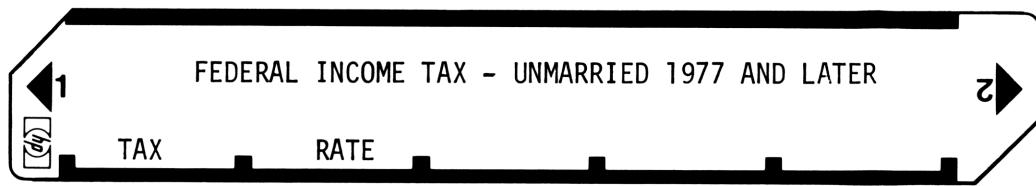
- a) 2,989
- b) 8,062
- c) 10,041
- d) 17,326
- e) 23,092
- f) 29,843
- g) 34,074
- h) 48,721
- i) 74,565
- j) 98,685
- k) 117,632
- l) 1,234

**Solution(s)**

- |             |     |               |     |
|-------------|-----|---------------|-----|
| a) 113.34   | 15% | g) 10,233.30  | 45% |
| b) 1,081.02 | 21% | h) 18,102.60  | 60% |
| c) 1,551.84 | 24% | i) 34,350.90  | 66% |
| d) 3,559.06 | 31% | j) 50,664.65  | 69% |
| e) 5,568.96 | 38% | k) 63,892.40  | 70% |
| f) 8,329.35 | 45% | l) 0 - no tax |     |

**Reference(s)**

# User Instructions



# 97 Program Listing I

23

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	*LBLA	21 11		057	0	00	
002	DSPZ	-63 02		058	0	08	
003	EEX	-23		059	1	01	
004	3	03		060	GT0e	22 16 15	
005	+	-24		061	*LBL0	21 00	i < 50
006	2	02		062	CLX	-51	
007	.	-62		063	1	01	
008	2	02		064	6	06	
009	-	-45		065	X>Y?	16-34	
010	ST01	35 01	Initiate	066	GT0e	22 00	i < 16
011	2	02		067	CLX	-51	
012	ST03	35 03		068	3	03	
013	ST05	35 05		069	0	00	
014	CLX	-51	Store i	070	X>Y?	16-34	
015	5	05	Tentative	071	GT01	22 01	16 < i < 30
016	6	06	Constants	072	2	02	
017	ST04	35 04		073	+	-55	
018	ST02	35 02		074	ST02	35 02	
019	X>Y?	16-34		075	X>Y?	16-34	
020	GT00	22 00	i < 50	076	GT02	22 02	
021	2	02		077	5	05	
022	X	-35		078	ST05	35 05	
023	X>Y?	16-34		079	6	06	
024	GT01	22 01		080	ST03	35 03	30 < i < 32
025	CLX	-51		081	5	05	
026	7	07		082	7	07	
027	0	00		083	1	01	
028	X	-35		084	GT0e	22 16 15	
029	1	01		085	*LBL1	21 01	
030	6	06		086	8	08	
031	9	09		087	-	-45	
032	1	01		088	ST02	35 02	
033	GT0e	22 16 11		089	X>Y?	16-34	
034	*LBL1	21 01	50 < i < 100	090	GT01	22 01	16 < i < 22
035	CLX	-51		091	4	04	
036	9	09		092	6	06	
037	0	00		093	ST04	35 04	
038	X>Y?	16-34		094	5	05	
039	GT02	22 02	50 < i < 90	095	ST05	35 05	
040	CLX	-51		096	4	04	
041	6	06		097	ST03	35 03	
042	9	09		098	2	02	
043	X	-35		099	8	08	
044	1	01		100	1	01	
045	5	05		101	ST06	35 06	
046	9	09		102	GT0e	22 16 15	
047	1	01		103	*LBL1	21 01	
048	GT0e	22 16 11		104	1	01	
049	*LBL2	21 02		105	6	06	
050	6	06		106	ST02	35 02	
051	2	02		107	3	03	
052	ST04	35 04		108	4	04	
053	1	01		109	ST04	35 04	
054	0	00		110	1	01	
055	ST03	35 03		111	6	06	
056	1	01		112	1	01	
REGISTERS							

0	<sup>1</sup> <i>i</i>	<sup>2</sup> <i>i</i> <sub>1</sub>	<sup>3</sup> $\Delta i$	<sup>4</sup> <i>R</i> <sub>1</sub>	<sup>5</sup> $\Delta R$	<sup>6</sup> <i>T</i> <sub>1</sub>	<sup>7</sup> <i>N</i>	<sup>8</sup>	<sup>9</sup> RATE
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A	B	C	D	E	F	G	H	I	J

# 97 Program Listing II

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
113	ST06	35 06		165	ST04	35 04	
114	GTOe	22 16 15		166	1	01	
115	*LBL2	21 02		167	ST05	35 05	
116	CLX	-51		168	.	-62	
117	4	04		169	5	05	
118	5	05		170	ST03	35 03	
119	X	-35		171	8	08	
120	4	04		172	ST02	35 02	
121	1	01		173	*LBL0	21 16 15	<u>CALCULATE</u>
122	1	01		174	RCL1	36 01	
123	GTOe	22 16 11		175	RCL2	36 02	
124	*LBL0	21 00		176	-	-45	
125	CLX	-51		177	RCL3	36 03	
126	6	06		178	=	-24	
127	X>Y?	16-34		179	INT	16 34	
128	GTO0	22 00	6 < i < 16	180	ST07	35 07	
129	CLX	-51		181	X^2	53	
130	8	08		182	LSTX	16-63	
131	ST02	35 02		183	+	-55	D = $\left[ \left( \frac{N^2 + N}{2} \right) \Delta R_{ai} \right]$
132	X<Y?	16-35		184	2	02	+ NΔR <sub>i</sub> + T <sub>i</sub>
133	GTO1	22 01		185	=	-24	
134	CLX	-51		186	RCL3	36 03	
135	2	02		187	X	-35	
136	4	04		188	RCL5	36 05	
137	X	-35		189	X	-35	
138	3	03		190	RCL7	36 07	
139	3	03		191	RCL2	36 02	
140	*LBL0	21 16 11		192	X	-35	
141	LSTX	16-63		193	RCL5	36 05	
142	ST09	35 09		194	X	-35	
143	R↓	-31		195	+	-55	
144	GTO3	22 03		196	+	-55	
145	*LBL1	21 01		197	RCL4	36 04	
146	2	02		198	RCL7	36 07	
147	ST÷4	35-24 04		199	RCL5	36 05	
148	4	04		200	X	-35	
149	1	01		201	+	-55	
150	GTOe	22 16 15		202	ST09	35 09	
151	*LBL0	21 00		203	RCL1	36 01	
152	CLX	-51		204	X	-35	
153	2	02		205	R↑	16-31	
154	ST02	35 02		206	*LBL3	21 03	
155	X>Y?	16-34		207	-	-45	TAX = iR - D
156	GTO0	22 00		208	1	01	
157	1	01		209	0	00	
158	9	09		210	X	-35	
159	ST04	35 04		211	X<0?	16-45	
160	7	07		212	CLX	-51	
161	GTOe	22 16 15		213	RTN	24	
162	*LBL0	21 00		214	*LBLB	21 12	
163	1	01		215	DSP0	-63 00	
164	4	04		216	RCL9	36 09	
				217	RTN	24	
				218	R/S	51	

LABELS

FLAGS

SET STATUS

A TAX	B RATE	C	D	E	0	FLAGS	TRIG	DISP
a Final Routine	b	c	d	e Calculate	1	ON OFF		
0 <sup>2</sup> Skip	1 <sup>1</sup> Skip	<sup>2</sup> Skip	3	4	2	0 <input type="checkbox"/> <input checked="" type="checkbox"/>	DEG <input checked="" type="checkbox"/>	FIX <input checked="" type="checkbox"/>
5	6	7	8	9	3	1 <input type="checkbox"/> <input checked="" type="checkbox"/>	GRAD <input type="checkbox"/>	SCI <input type="checkbox"/>
						2 <input type="checkbox"/> <input checked="" type="checkbox"/>	RAD <input type="checkbox"/>	ENG <input type="checkbox"/>
						3 <input type="checkbox"/> <input checked="" type="checkbox"/>	n <u>2</u>	

# Program Description I

**Program Title** Federal Income Tax - Joint or Separate (Schedule Y)

**Contributor's Name** Howard B. Kutner, CPA

**Address** 370 Lexington Avenue - Rm 909

**City** New York

**State** New York

**Zip Code** 10017

## Program Description, Equations, Variables

This program utilizes a mathematical formula to represent the Federal Tax Table for married Taxpayers filing either jointly or separately. It enables the user to obtain the Tax for a given taxable Income by pressing single function key. The Top bracket Tax Rate may then be obtained by pressing another key.

$$N = \text{INT} \left( \frac{i - i_1}{\Delta i} \right)$$

$$T_{\text{Sep}} = iR - D \quad \text{where:}$$

$$R = .01 (R_1 + N\Delta R)$$

$$T_{\text{Married}} = 2x[T_{\text{Sep}}(i/2)]$$

$$D = 10 \left[ \left( \frac{N^2 + N}{2} \right) \Delta R \Delta i + N \Delta R i_1 \right] + T_1$$

TABLE OF CONSTANTS WITHIN VARIOUS BRACKETS OF  $i$  ( $i = \frac{\text{Taxable}}{1000}$ )

range of $i$	$R_1$	$\Delta R$	$i_1$	$\Delta i$	$T_1$	$D$
0 To 2	14	1	0	.5	0	-
2 To 10	19	3	2	2	70	-
10 To 12	32	-	-	-	-	1010
12 To 22	36	3	12	2	1490	-
22 To 26	50	-	-	-	-	3970
26 To 32	53	-	-	-	-	4750
<b>Operating Limits and Warnings</b>	32 To 38	55	-	-	-	5390
	38 To 50	58	2	38	6	6530
	50 To 90	62	2	50	10	8410
	90 To 100	69	-	-	-	13510
	over 100	70	-	-	-	14510

THIS PROGRAM IS FOR 1977 AND LATER - For incomes less than \$20,000 (40,000 if joint)  
a different Tax Table may be required.

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

NEITHER HP NOR THE CONTRIBUTOR MAKES ANY EXPRESS OR IMPLIED WARRANTY OF ANY KIND WITH REGARD TO THIS PROGRAM MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. NEITHER HP NOR THE CONTRIBUTOR SHALL BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING OUT OF THE FURNISHING, USE OR PERFORMANCE OF THIS PROGRAM MATERIAL.

# Program Description II

Sketch(es)	
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**Tax Rate Schedules**

<p><b>Married Filing Joint Returns and Qualifying Widows and Widowers</b></p> <p><b>Sample Problem:</b> Use this schedule if you checked Box 2 or Box 5 on Form 1040—</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 40%;">If the amount on Schedule TC, Part I, line 3, is:</td> <td style="width: 60%;">Enter on Sched- ule TC, Part I, line 4:</td> </tr> <tr> <td colspan="2" style="text-align: center;">Not over \$3,200.....</td> </tr> <tr> <td style="text-align: right;">Over—</td> <td style="text-align: right;">But not over—</td> </tr> <tr> <td style="text-align: right;">\$3,200</td> <td style="text-align: right;">\$4,200</td> </tr> <tr> <td style="text-align: right;">\$4,200</td> <td style="text-align: right;">\$5,200</td> </tr> <tr> <td style="text-align: right;">\$5,200</td> <td style="text-align: right;">\$6,200</td> </tr> <tr> <td style="text-align: right;">\$6,200</td> <td style="text-align: right;">\$7,200</td> </tr> <tr> <td style="text-align: right;">\$7,200</td> <td style="text-align: right;">\$11,200</td> </tr> <tr> <td style="text-align: right;">\$11,200</td> <td style="text-align: right;">\$15,200</td> </tr> <tr> <td style="text-align: right;">\$15,200</td> <td style="text-align: right;">\$19,200</td> </tr> <tr> <td style="text-align: right;">\$19,200</td> <td style="text-align: right;">\$23,200</td> </tr> <tr> <td style="text-align: right;">\$23,200</td> <td style="text-align: right;">\$27,200</td> </tr> <tr> <td style="text-align: right;">\$27,200</td> <td style="text-align: right;">\$31,200</td> </tr> <tr> <td style="text-align: right;">\$31,200</td> <td style="text-align: right;">\$35,200</td> </tr> <tr> <td style="text-align: right;">\$35,200</td> <td style="text-align: right;">\$39,200</td> </tr> <tr> <td style="text-align: right;">\$39,200</td> <td style="text-align: right;">\$43,200</td> </tr> <tr> <td style="text-align: right;">\$43,200</td> <td style="text-align: right;">\$47,200</td> </tr> <tr> <td style="text-align: right;">\$47,200</td> <td style="text-align: right;">\$55,200</td> </tr> <tr> <td style="text-align: right;">\$55,200</td> <td style="text-align: right;">\$67,200</td> </tr> <tr> <td style="text-align: right;">\$67,200</td> <td style="text-align: right;">\$79,200</td> </tr> <tr> <td style="text-align: right;">\$79,200</td> <td style="text-align: right;">\$91,200</td> </tr> <tr> <td style="text-align: right;">\$91,200</td> <td style="text-align: right;">\$103,200</td> </tr> <tr> <td style="text-align: right;">\$103,200</td> <td style="text-align: right;">\$123,200</td> </tr> <tr> <td style="text-align: right;">\$123,200</td> <td style="text-align: right;">\$143,200</td> </tr> <tr> <td style="text-align: right;">\$143,200</td> <td style="text-align: right;">\$163,200</td> </tr> <tr> <td style="text-align: right;">\$163,200</td> <td style="text-align: right;">\$183,200</td> </tr> <tr> <td style="text-align: right;">\$183,200</td> <td style="text-align: right;">\$203,200</td> </tr> <tr> <td style="text-align: right;">\$203,200</td> <td style="text-align: right;">\$110,980+70%</td> </tr> </table> <p style="text-align: center;">—0—</p> <table border="1" style="width: 100%; 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<p><b>Reference(s)</b> Internal Revenue Service Form 1040 and Instructions for 1977.</p> <p>This program is for use with Schedule TC, Schedule D, Schedule G, Form 4726 etc. FOR INCOMES LESS THAN \$20,000 (40,000 Joint) a different Tax Table <u>may</u> be required.</p>	
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# Program Description II

27

Sketch(es)

**Sample Problem(s)** Find the Tax for married Taxpayers filing jointly with the following Taxable incomes. Also find the Top Tax Rate in each case.

- a) 6,921
- b) 21,093
- c) 25,661
- d) 42,946
- e) 50,495
- f) 62,616
- g) 77,029
- h) 90,741
- i) 168,493
- j) 196,675
- k) 218,067
- l) 1,234.00

**Solution(s)**

- |              |     |                |     |
|--------------|-----|----------------|-----|
| a) 572.57    | 17% | g) 29,825.95   | 55% |
| b) 3,790.04  | 28% | h) 37,713.78   | 58% |
| c) 5,167.52  | 32% | i) 87,179.24   | 68% |
| d) 12,025.70 | 45% | j) 106,477.75  | 69% |
| e) 15,707.50 | 50% | k) 121,386.90  | 70% |
| f) 21,990.48 | 53% | l) 0.00 no tax |     |

**Reference(s)**

# User Instructions

## FEDERAL INCOME TAX - 1977 AND LATER

**1 MARRIED TRUST/ESTATE TOP  
FILING MARRIED FILING BRACKET  
JOINTLY SEPARATELY RATE**

# 97 Program Listing I

29

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	*LBLB	21 12		057	4	04	
002	DSP2	-63 02		058	1	01	
003	EEX	-23		059	GTOe	22 16 15	
004	3	03		060	*LBL0	21 00	$i < 50$
005	=	-24		061	CLX	-51	
006	1	01		062	2	02	
007	.	-62		063	2	02	
008	6	06		064	X>Y?	16-34	$i < n$
009	-	-45		065	GTO0	22 00	
010	ST01	35 01	Store i	066	CLX	-51	
011	2	02	and	067	3	03	
012	ST03	35 03	Tentative	068	2	02	
013	ST05	35 05	constants	069	X>Y?	16-34	
014	CLX	-51		070	GTO1	22 01	$n < i < 3n$
015	5	05		071	5	06	
016	0	00		072	+	-55	
017	ST04	35 04		073	ST02	35 02	
018	ST02	35 02		074	X>Y?	16-34	
019	X>Y?	16-34		075	GTO2	22 02	$3n < i < 38$
020	GTO0	22 00	$i < 50$	076	5	05	
021	2	02		077	8	08	
022	x	-35		078	ST04	35 04	
023	X>Y?	16-34		079	6	06	
024	GTO1	22 01	$50 < i < 100$	080	ST03	35 03	
025	CLX	-51		081	6	06	
026	7	07		082	5	05	
027	0	00		083	3	03	
028	x	-35	Calculate for	084	GTOe	22 16 15	
029	1	01	$i > 100$	085	*LBL2	21 02	
030	4	04		086	CLX	-51	
031	5	05		087	5	05	
032	1	01		088	5	05	
033	GTOa	22 16 11		089	x	-35	
034	*LBL1	21 01	$50 < i < 100$	090	5	05	
035	CLX	-51		091	3	03	
036	9	09		092	9	09	
037	0	00		093	GTOa	22 16 11	$n < i < 3n$
038	X>Y?	16-34		094	*LBL1	21 01	
039	GTO2	22 02	$50 < i < 90$	095	6	06	
040	CLX	-51		096	-	-45	
041	6	06		097	X>Y?	16-34	$n < i < 2n$
042	9	09		098	GTO1	22 01	
043	x	-35	calculate for	099	CLX	-51	
044	1	01	$90 < i < 100$	100	5	05	
045	3	03		101	3	03	
046	5	05		102	x	-35	
047	1	01		103	4	04	
048	GTOa	22 16 11		104	7	07	
049	*LBL2	21 02		105	5	05	
050	6	06		106	GTOa	22 16 11	
051	2	02		107	*LBL1	21 01	
052	ST04	35 04	Store constants	108	CLX	-51	
053	1	01	for	109	5	05	
054	0	00	$50 < i < 90$	110	8	08	
055	ST03	35 03		111	x	-35	
056	8	08		112	3	03	

REGISTERS

0	1 $i$	2 $i_1$	3 $\Delta i$	4 $R_i$	5 $\Delta R$	6 $T_i$	7 $N$	8	9 Rate
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A	B	C	D	E	F	G	H	I	J

## **97 Program Listing II**

STEP	KEY ENTRY	KEY CODE	COMMENTS
113	9	09	
114	7	07	
115	GTO <sub>a</sub>	22 16 11	
116	*LBL0	21 00	i < rr
117	CLX	-51	
118	1	01	
119	0	00	
120	X>Y?	16-34	
121	GTO0	22 00	10 < i < rr
122	2	02	
123	+	-55	
124	X>Y?	16-34	
125	GTO1	22 01	
126	ST02	35 02	
127	3	03	
128	ST05	35 05	
129	x	-35	
130	ST04	35 04	
131	1	01	
132	4	04	
133	9	09	
134	GTOe	22 16 15	
135	*LBL1	21 01	10 < i < 12
136	CLX	-51	
137	3	03	
138	2	02	
139	x	-35	
140	1	01	
141	0	00	
142	1	01	
143	*LBLa	21 16 11	
144	LSTX	16-63	
145	ST09	35 09	
146	R↓	-31	
147	GTO3	22 03	
150			
148	*LBL0	21 00	10 < i < rr
149	CLX	-51	
150	2	02	
151	X>Y?	16-34	
152	GTO0	22 00	i < r
153	ST02	35 02	
154	3	03	
155	ST05	35 05	
156	1	01	
157	9	09	
158	ST04	35 04	
159	7	07	
160	GTOe	22 16 15	
161	*LBL0	21 00	Store Constants for 2 < i < 10
162	1	01	
163	4	04	
164	ST04	35 04	Store Constants for i < 2

LABELS

LABELS					221	2	02	SET STATUS		
A JOINT	B SEPARATE	C RATE	D	E	222	X	-35	TRIG	DISP	
a <u>Calculate</u>	b	c	d	e <u>Calculate</u>	223	RTN	24)FF	DEG	FIX	
0 <u>skip</u>	1 <u>skip</u>	2 <u>skip</u>	3	4	2		1 <input type="checkbox"/>	GRAD	SCI	
5	6	7	8	9	3		2 <input type="checkbox"/>	RAD	ENG	
							3 <input type="checkbox"/>	n	2	

# Program Description I

<b>Program Title</b>	Schedule TC	Tax Computation Schedule	Form 1040
<b>Contributor's Name</b>	Herman G. Herbig		
<b>Address</b>	P.O. Box 731		
<b>City</b>	Minden	State Nevada	Zip Code 89423

## Program Description, Equations, Variables

Tax payers filing as single, married filing separately or unmarried head of household with adjusted gross incomes of \$20,000+ or qualifying widow(er) and married filing jointly with adjusted gross incomes of \$40,000+ must determine their tax liability by completing Schedule TC.

## Operating Limits and Warnings

This program completes only part 1 of schedule TC<sub>1</sub> "Tax Computation for Taxpayers Who Cannot Use the Tax Tables".

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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# Program Description II

**Sample Problem (s)** Calculate the tax and generate line items for the following taxpayers:

**SINGLE (BOX 1)**

Tax Table Income -	\$30,000
Exemptions -	1
Tax -	\$ 8,760

**MARRIED FILING SEPARATELY (BOX 3)**

Tax Table Income -	\$33,600
Exemptions -	3
Tax -	\$12,210

**Solution (s) SINGLE**

**INPUT**

1 [f] [A]

1 [A]

30000 [B]

8760 [E]

**MARRIED FILING SEPARATELY**

3 [f] [A]

3 [A]

33600 [B]

12210 [C]

[E]

**SINGLE**

Line	Entry
1	30,000
2	750
3	29,250
4	8,760
5	35
6	29,250
7	2,200
8	27,050
9	180
10	180
11	\$8,580

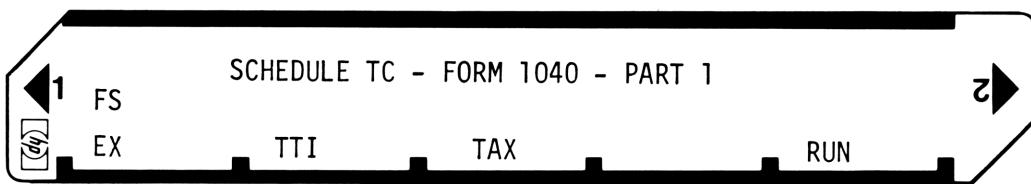
**MARRIED FILING SEPARATELY**

Line	Entry
1	33,600
2	2,250
3	31,350
4	12,210
5	105
10	105
11	12,105

**Reference(s)**

IRS Schedule TC (Form 1040) and Instructions.

# User Instructions



STEP	INSTRUCTIONS	INPUT DATA/UNITS	KEYS	OUTPUT DATA/UNITS
1.	Load side 1 and side 2			
2.	Enter filing status as indicated on form 1040 lines 1-5	FS	f A	FS
3.	Enter number of exemptions claimed from line 7 form 1040	EX	A	EX
4.	Enter tax table income from line 34 form 1040	TTI	B	TTI
5.	Enter tax from Schedule D,G,X,Y, or Z or form 4726	TAX	C	TAX
6.	Execute  Lines 1 through 11 will be output for all taxpayers except those who are married and filing separately. These taxpayers are to omit lines 6 through 9 and in this case the program logic skips from line 5 to line 10 and continues		E	1 Line 1 2 Line 2 3 Line 3 4 Line 4 5 Line 5 6 Line 6 7 Line 7 8 Line 8 9 Line 9 10 Line 10 11 Line 11
7.	For new case go to step 2.			

# 97 Program Listing I

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	*LBLA	21 11	Load exemptions	056	2	02	
002	ST02	35 02		057	X=Y?	16-33	
003	RTN	24		058	GT02	22 02	
004	*LBLB	21 12	Load tax table income	059	RCL5	36 05	
005	ST01	35 01		060	5	05	
006	RTN	24		061	X=Y?	16-33	
007	*LBLC	21 13	Load income tax	062	GT02	22 02	
008	ST04	35 04		063	2	02	
009	RTN	24		064	2	02	
010	*LBL0	21 00	Increment Line number	065	0	00	
011	ISZI	16 26 46		066	0	00	
012	DSP0	-63 00		067	PRTX	-14	
013	RCLI	36 46		068	ST06	35 06	
014	PRTX	-14		069	*LBL4	21 04	
015	DSP2	-63 02		070	GSB0	23 00	
016	RTN	24		071	RCL3	36 03	
017	*LBL0	21 15	Initialize: For line numbers	072	RCL6	36 06	
018	0	00		073	-	-45	
019	ST01	35 46		074	PRTX	-14	
020	GSB0	23 00		075	GSB0	23 00	
021	RCL1	36 01		076	R↓	-31	
022	PRTX	-14		077	2	02	
023	GSB0	23 00		078	%	55	
024	RCL2	36 02	Calculate exemption x \$750	079	ST09	35 09	
025	7	07		080	1	01	
026	5	05		081	8	08	
027	0	00		082	0	00	
028	x	-35		083	X>Y?	16-34	
029	PRTX	-14		084	GT01	22 01	
030	GSB0	23 00		085	PRTX	-14	
031	R↓	-31		086	*LBL5	21 05	
032	RCL1	36 01		087	GSB0	23 00	
033	X#Y	-41		088	R↓	-31	
034	-	-45		089	RCL0	36 00	
035	ST03	35 03		090	X>Y?	16-34	
036	PRTX	-14		091	GT06	22 06	
037	GSB0	23 00		092	R↓	-31	
038	RCL4	36 04		093	PRTX	-14	
039	PRTX	-14		094	*LBL7	21 07	
040	GSB0	23 00	Calculate general tax credit	095	ST-4	35-45 04	
041	RCL2	36 02		096	GSB0	23 00	
042	3	03	Exemptions x \$35	097	RCL4	36 04	
043	5	05		098	X#0?	16-42	
044	x	-35		099	GT08	22 08	
045	PRTX	-14		100	0	00	
046	ST00	35 00		101	PRTX	-14	
047	RCL5	36 05	Branch if married filing separately	102	RTN	24	
048	3	03		103	*LBL8	21 08	
049	X=Y?	16-33		104	PRTX	-14	
050	GT03	22 03		105	RTN	24	
051	GSB0	23 00	Taxable income	106	*LBL6	21 06	
052	RCL3	36 03		107	RCL0	36 00	
053	PRTX	-14		108	PRTX	-14	
054	GSB0	23 00	Branch if married filing jointly	109	GT07	22 07	
055	RCL5	36 05		110	RTN	24	

### REGISTERS

0 Used	1 Tax Table Income	2 Exemp.	3 Taxable Income	4 Income Tax	5 Filing Status	6 Used	7	8	9 Used
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A	B	C	D	E	F	G	H	I	J

# 97 Program Listing II

35

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
111	*LBL1	21 01					
112	RCL9	36 09		170			
113	FRTX	-14					
114	GT05	22 05					
115	RTN	24					
116	*LBL2	21 02	Branch for married filing jointly or qualifying widow(er)				
117	3	03					
118	2	02					
119	0	00	Optional Line 7				
120	0	00	Return to main program				
121	PRTX	-14		180			
122	ST06	35 06					
123	GT04	22 04	Load filing status				
124	RTN	24					
125	*LBLa	21 16 11					
126	ST05	35 05	Optional routine for married filing separately where lines 6				
127	RTN	24	through 9 are to be omitted				
128	*LBL3	21 03					
129	9	09					
130	ST01	35 46		190			
131	GSE0	23 00	Optional line 10 Continue married filing separately routine				
132	RCL8	36 00					
133	PRTX	-14					
134	GSE0	23 00					
135	RCL4	36 04					
136	RCL8	36 00					
137	-	-45	Optional line 11				
138	PRTX	-14					
139	RTN	24					
140	R/S	51					
150				200			
160				210			
				220			

## LABELS

LABELS					FLAGS		SET STATUS		
A Exempt.	B Tax table	C Income	D TAX	E RUN	0	FLAGS	TRIG	DISP	
a	b	c	d	e	1	ON OFF	DEG	FIX	
0 Used	1 Used	2 Used	3 Used	4 Used	2	1	GRAD	SCI	
5 Used	6 Used	7 Used	8 Used	9	3	2	RAD	ENG	
						3		n <u>2</u>	

# Program Description I

<b>Program Title</b>	Tax Deduction Schedule A Form 1040 Medical and Dental		
<b>Contributor's Name</b>	Hewlett-Packard		
<b>Address</b>	1000 N.E. Circle Blvd.		
<b>City</b>	Corvallis	<b>State</b>	Oregon
			<b>Zip Code</b> 97330

**Program Description, Equations, Variables**

Given the amounts spent by a taxpayer for medical care, for medicine and drugs, and for doctors, dentists, hospitals, etc. and his adjusted gross income for the tax period the program prints the ten line items on schedule A Form 1040

**Operating Limits and Warnings** Program must be run sequentially A thru D. Data for later steps is produced in the earlier steps of the program.

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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# Program Description II

## SAMPLE PROBLEMS

	PROBLEM 1	PROBLEM 2
Insurance Cost	299.98	300.01
Medicine & Drugs	99.00	400.00
Adj. Gross Income	10,000.00	20,000.00
Doctors, Dentists, Hosp.	100.00	1,600.00

## SOLUTION(s)

### LN #

### SOLUTION 1

### SOLUTION 2

299.98 [A]                    300.01 [A]

99                                400                            [B]

10,000                        20,000                        [C]

100                                1,600                        [D]

1. One half (but not more than \$150) of insurance premiums for med. care      1      149.99      150.00

2. Medicine and drugs      2      99.00      400.00

3. Enter 1% of Adj. Gross Income      3      100.00      200.00

4. Subtract 3 from 2. Enter 4 difference (if less than zero enter zero)      4      0.00      200.00

5. Enter balance of insurance premiums not entered on line 1      5      149.99      150.01

6. Other medical & dental exp. (doctors, dentists, hospitals)      6      100.00      1600.00

7. Total (lines 4,5,6)      7      249.99      1950.01

8. Enter 3% of line 31 Form 1040, Adj. Gross Income      8      300.00      600.00

9. Subtract line 8 from line 7 (if less than zero, enter zero)      9      0.00      1350.01

10. Total (add lines 1&9)      10      149.99      1500.01

# Program Description II

<b>Sketch(es)</b>	299.98 GSBA 99.00 GSBB 10000.00 GSBC 100.00 GSBD	300.01 GSBA 400.00 GSBB 20000.00 GSBC 1600.00 GSBD
	1.00 *** 149.99 ***	1.00 *** 150.00 ***
	2.00 *** 99.00 ***	2.00 *** 400.00 ***
	3.00 *** 100.00 ***	3.00 *** 200.00 ***

<b>Sample Problem(s)</b>	4.00 *** 0.00 ***	4.00 *** 200.00 ***
	5.00 *** 149.95 ***	5.00 *** 150.01 ***
	6.00 *** 100.00 ***	6.00 *** 1600.00 ***
	7.00 *** 249.99 ***	7.00 *** 1950.01 ***
	8.00 *** 300.00 ***	8.00 *** 600.00 ***
	9.00 *** 0.00 ***	9.00 *** 1350.01 ***
	10.00 *** 149.99 ***	10.00 *** 1500.01 ***

**Solution(s)**

Figures in sample problems were chosen to show the rejection of negative numbers and the substitution of zeros, and discrimination where limits are set. Otherwise round figures were chosen to facilitate following the flow of the problem.

**Reference(s)**

Schedule A, Form 1040 Federal Tax Return for 1977.

This program was based on an HP-65 Users' Library program #2386A submitted by David D. England.

# User Instructions

1	MEDICAL DEDUCTIONS				2
	INS. PREM.	M & D	A.G.I.	DR. HP.	

# 97 Program Listing I

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	*LBLA	21 11		057	ST05	35 05	
002	ENT↑	-21		058	RCL3	36 03	
003	ENT↑	-21		059	+	-55	
004	ENT↑	-21		060	RCL4	36 04	
005	2	02		061	+	-55	
006	÷	-24		062	ST06	35 06	Line 7
007	1	01		063	RCL7	36 07	
008	5	05		064	-	-45	
009	0	00		065	0	00	
010	X>Y	-41		066	X>Y	-41	
011	X>Y?	16-35		067	X>Y?	16-34	
012	GT01	22 01		068	GT03	22 03	
013	1	01		069	0	00	
014	5	05		070	*LBL3	21 03	
015	0	00		071	ST08	35 08	
016	*LBL1	21 01		072	RCL0	36 00	
017	ST08	35 00		073	+	-55	
018	R↓	-31		074	ST09	35 09	
019	R↓	-31		075	0	00	
020	CLX	-51		076	ST01	35 46	
021	RCL0	36 00		077	*LBL4	21 04	
022	-	-45		078	SPC	16-11	
023	ST04	35 04		079	RCLI	36 46	
024	RTN	24		080	1	01	
025	*LBLB	21 12		081	+	-55	
026	ST01	35 01		082	PRTX	-14	
027	RTN	24		083	RCLI	36 45	
028	*LBLC	21 13		084	PRTX	-14	
029	ENT↑	-21		085	ISZI	16 26 46	
030	ENT↑	-21		086	S	09	
031	ENT↑	-21		087	RCLI	36 46	
032	.	-62		088	X>Y?	16-34	
033	0	00		089	R/S	51	
034	1	01		090	GT04	22 04	
035	X	-35		091	RTN	24	
036	ST02	35 02		092	R/S	51	
037	CHS	-22					
038	RCL1	36 01					
039	+	-55					
040	0	00					
041	X>Y	-41					
042	X>Y?	16-34					
043	GT02	22 02					
044	0	00					
045	*LBL2	21 02					
046	ST03	35 03					
047	R↓	-31					
048	R↓	-31					
049	CLX	-51					
050	.	-62					
051	0	00					
052	3	03					
053	X	-35					
054	ST07	35 07					
055	RTN	24					
056	*LBLD	21 14					

### REGISTERS

0 Ln 1	1 Ln 2	2 Ln 3	3 Ln 4	4 Ln 5	5 Ln 6	6 Ln 7	7 Ln 8	8 Ln 9	9 Ln 10
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A	B	C	D	E	F	G	H	I	J

# Program Description I

**Program Title** Maxtax, Mintax, Alternative Tax - Joint Returns

**Contributor's Name** Wayne D. Neathery

**Address** P. O. Box 1000

**City** Toledo

**State** Ohio

**Zip Code** 43697

**Program Description, Equations, Variables** Program calculates and displays in order lines 2 through 11 of Part I, Schedule TC (Form 1040), Total Credits (line 46 of Form 1040) Balance (line 47), Minimum Tax (line 49) and Total Tax (line 54). Program includes calculation of maximum tax, minimum tax and alternative capital gains tax. The program will operate when any or all of the following are absent: Personal Service Income, Tax Preferences, Tax Credits and Long Term Capital Gains. All calculations are made without need to refer to tax tables.

**Operating Limits and Warnings** Program does not include income averaging.

Dollar limit for taxable income 0 - \$2,183,200.

If there are additional taxes (line 36 Form 1040) the calculations will need to be made manually beyond that point and if there are other taxes on lines 48, 50, 51, 52 or 53 they will need to be added into the "total tax" line 54, Form 1040.

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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# Program Description II

**Sketch(es)**
**Sample Problem(s)**

Personal Service Net Income	\$106,412	Store 9
Adjusted Gross Income	135,615	Store 8
Tax Preference Items	38,607	Store 7
Credits	2,716	Store 6
Exemptions	7	Store E
Long Term Capital Gain	27,200	Store B
Tax Table Income	121,300	

Start

"A"

**Solution(s)**

Schedule TC Form 1040	Line 2 \$ 5,250 3 116,050 4 50,481 5 245 6 116,050 7 3,200 8 112,850 9 180 10 245 11 50,236	Form 1040 Line 46 \$ 2,716 Line 47 47,520 Line 49 2,227.05 "Total Tax" Line 54 49,747.05
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(and Form 1040  
Lines 35 & 37)
**Reference(s)**

# User Instructions



# Program Listing I

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	LBL A	31-25-11			GSB 9	31 22 09	
	SF 0	35 51 00			CF 1	35 61 01	
	SF 1	35 51 01			2	02	Tax at 50% on Remainder
	7	07	Calculate Personal Exemption Line 2 TC	060	÷	81	
	5	05			STO + 3	33 61 03	
	0	00			1	01	Adjust Tax Rate
	RCL E	34 15			STO 2	33 02	
	X	71			2	02	
	-X-	31 84	Taxable Income Line 3 TC		STO - 4	33 81 04	Change Bracket
010	-	51			3	03	Increment
	-X-	31 84			STO X 4	33 71 04	No Personal Service
	STO 5	33 05	Zero Bracket Amount		RCL 9	34 09	Income?
	3	03			X = 0	31 51	Personal Service Income
	2	02		070	GTO E	22 15	Taxable (Before Deducting Preferences)
	0	00			RCL 8	34 08	
	0	00			÷	81	
	STO D	33 14			RCL 5	34 05	
	-	51			X	71	
	STO O	33 00			RCL 5	34 05	
020	1	01	Start of		X > y	32 81	
	3	03			X ≥ y	35 52	
	STO 2	33 02			STO 1	33 01	
	1	01			RCL 7	34 07	
	STO C	33 13		080	5	05	Deduct 55,200 and Preferences
	EEX	43			5	05	
	3	03			2	02	
	STO 4	33 04			0	00	
	0	00			0	00	
	STO 3	33 03			+	61	
030	GSB 9	31 22 09			STO - 1	33 51 01	
	GSB 9	31 22 09			LBL E	31 25 15	Deduct L.T. Gain from Taxable
	GSB 9	31 22 09			RCL B	34 12	
	GSB 9	31 22 09			STO - 0	33 51 00	
	4	04		090	GSB 8	31 22 08	
	STO X 4	33 71 04	Increase Bracket Increment		GSB 8	31 22 08	
	2	02			3	03	Repeat
	STO C	33 13	Increase Rate Increment		STO C	33 13	
	GSB 9	31 22 09			GSB 8	31 22 08	Adjustments
	3	03			2	02	
040	STO C	33 13	Repeat		STO C	33 13	To
	GSB 9	31 22 09			GSB 8	31 22 08	Tax
	GSB 9	31 22 09			3	03	
	GSB 9	31 22 09			STO - 4	33 81 04	Bracket
	4	04			5	05	
	STO C	33 13		100	STO X 4	33 71 04	
	GSB 9	31 22 09			GSB 8	31 22 08	
	GSB 9	31 22 09			GSB 8	31 22 08	
	GSB 9	31 22 09			GSB 8	31 22 08	
	4	04			GSB 8	31 22 08	
	STO C	33 13			GSB 8	31 22 08	
	GSB 9	31 22 09			1	01	
	GSB 9	31 22 09			STO C	33 13	
	GSB 9	31 22 09			GSB 8	31 22 08	
	3	03			9	09	Rate
	STO C	33 13			9	09	Increments
050	GSB 9	31 22 09			STO X 4	33 71 04	
	GSB 9	31 22 09			CF 0	35 61 00	For Alt. Tax
	GSB 9	31 22 09					
	GSB 9	31 22 09					
	GSB 9	31 22 09					
	2	02					
	STO C	33 13					
	STO X 4	33 71 04					

## REGISTERS

0 Taxable	1 Pers. Serv.	2 Rate	3 Tax	4 Increment	5 Taxable	6 Credits	7 Pref.	8 Adj. Gross	9 Pers. Serv.
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A General Credit	B Cap. Gain	C Rate Increment	D Zero Bracket Amount	E Exemptions	I				

# Program Listing II

45

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
	LBL 8	31 25 08			X	71	
	RCL 1	34 01		170	-X-	31 84	Line 5 TC
	X < 0	31 71	Calculate Tax On		STO A	33 11	and Store
	GTO 9	22 09	Income Above		RCL 5	34 05	Taxable Income
	RCL 4	34 04	50% Rate		-X-	31 84	Line 6 TC
	SF 1	33 51 01	that is		RCL D	34 14	Zero Bracket
	X > Y	32 81	Reduced To		-X-	31 84	Amt. Line 7 TC
120	R↓	35 53	50% By Max.		-	51	
	RCL 2	34 02	Tax or Alt.		-X-	31 84	Line 8 TC
	RCL C	34 13	Tax and Deduct		2	02	
	+	61			%	31 82	2% of
	%	31 82		180	1	01	
	STO - 3	33 51 03			8	08	Line 8
	LBL 9	31 25 09			0	00	
	RCL C	34 13	Calculate		X > Y	32 81	With \$180 Max.
	STO + 2	33 61 02	Tax		R↓	35 53	
	RCL 4	34 04	On		-X-	31 84	Line 9 TC
130	SF 0	33 51 00	Bracket		RCL A	34 11	
	RCL 2	34 02	Increment		X ≤ Y	32 71	Greater of Line
	X > 0	31 82			R↓	35 53	5 or Line 9
	STO + 3	33 61 03			-X-	31 84	Line 10 TC
	RCL 0	34 00		190	STO - 3	33 51 03	
	X > 0	31 81			RCL 3	34 03	
	RTN	35 22			X < 0	31 71	
	STO 1	33 01	Back		0	00	
	RCL 2	34 02	Out		R/S	84	Line 11 TC
	%	31 82	Excess		RCL 6	34 06	Credits
140	STO + 3	33 61 03			-X-	31 84	Line 46 (1040)
	F ? 1	35 71 01	No Income		-	51	
	GTO 7	22 07	Above 50% Rate		X < 0	31 71	
	2	02	Prepare To		0	00	
	5	05	Apply Limit of	200	-X-	31 84	Line 47 (1040)
	43	43	25% on First		STO 3	33 03	Calculate
	3	03	50,000 L.T.		2	02	
	STO + 1	33 61 01	Gain		÷	81	
	RCL B	34 12			1	01	
	STO + 0	33 61 00			EEX	43	Minimum
150	X ≤ Y	32 71	L.T. Gains Not		4	04	
	GTO 7	22 07	Over 50,000		X ≤ Y	32 71	
	F ? 0	35 71 00	If Tax Bracket		X ≥ Y	35 52	
	GTO 6	22 06	Over 70% w/o	210	STO - 7	33 51 07	
	-	51	L.T.G. —		RCL 7	34 07	
	RCL 2	34 02	Tax on Excess		1	01	
	%	31 82	Over 50,000		5	05	
	STO - 3	33 51 03			%	31 82	
	GTO 7	22 07			X < 0	31 71	
	LBL 6	31 25 06			0	00	
160	0	00			-X-	31 84	
	STO B	33 12	Clear Cap.		STO + 3	33 61 03	Total Tax
	RTN	35 22	Gains Reg.		RCL 3	34 03	Line 54 (1040)
	LBL 7	31 25 07			R/S	84	
	RCL 3	34 03	Tax Line 4	220			
	R/S	84	TC				
	3	03					
	5	05	Calculate				
	RCL E	34 15	General				
			Credit				

## LABELS (address)

LABELS (address)					FLAGS	SET STATUS			
A	B	C	D	E	0	Used	FLAGS	TRIG	DISP
a	b	c	d	e	1	Used	ON OFF		
0	1	2	3	4	2	-	0 <input type="checkbox"/> X	DEG <input checked="" type="checkbox"/>	FIX <input checked="" type="checkbox"/>
5	6	161	165	115	9	128	1 <input type="checkbox"/> X	GRAD <input type="checkbox"/>	SCI <input type="checkbox"/>
							2 <input type="checkbox"/> X	RAD <input type="checkbox"/>	ENG <input type="checkbox"/>
							3 <input type="checkbox"/> X		n <u>2</u>

# Program Description I

<b>Program Title</b>	Income Averaging Schedule G	<b>Married Taxpayers</b>
<b>Contributor's Name</b>	Wayne D. Neathery	
<b>Address</b>	P. O. Box 1000	
<b>City</b>	Toledo	<b>State</b> Ohio <b>Zip Code</b> 43697

**Program Description, Equations, Variables** This program calculates and displays in order the answers needed for completion of Schedule G, Form 1040. Schedule G is used for Five Year Income Averaging. Subject to the limits given below, the program calculates tax for married taxpayers filing joint tax returns and married taxpayers filing separately. The program can also be used to calculate income tax for married persons filing jointly or separately when income averaging is not involved. All calculations are made without need to refer to the tax tables, thus avoiding the delays and possibilities of error that would result from reference to the tables. Calculations stop and "error" is displayed if the "averagable income" is \$3,000 or less.

**Operating Limits and Warnings** Program does not provide for:

- (1) Amounts subject to a penalty under 72(m)(5) - Line 6 Schedule G
- (2) Excess community income - Line 8 Schedule G

<b>Operating Limits</b>	Married Joint	0 to \$2,183,200
	Married Separate	0 to \$1,091,600

**Note:** Income figures used are "base period income" Line 4, not "taxable income" Line 1.

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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# Program Description II

**Sketch(es)**

Sketch(es) are not available for this program.

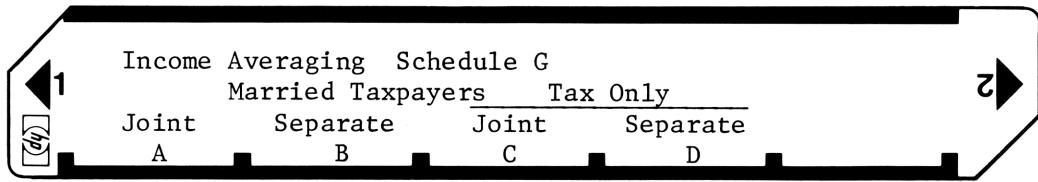
<b>Sample Problem(s)</b>	<u>#1</u>	<u>#2</u>	<u>#3</u>	<u>#4</u>	<u>#5</u>
Type Return	Joint	Joint	Separate	Joint	Separate
Taxable Income 1977	21,760	43,630	31,400	47,315	29,800
Base Period Income					
Year 1	19,220	19,220	14,610	Not Applicable	
2	18,600	18,600	16,840	"	"
3	21,014	21,014	10,205	"	"
4	17,210	17,210	8,615	"	"
To Start - Depress	"A"	"A"	"B"	"C"	"D"

**Solution(s)**

Schedule G Line 10	22,813.20	22,831.20	15,081.00	
11 -	1,053.20	20,816.80	16,319.00	
12	Error	22,813.20	15,081.00	
13		4,163.36	3,263.80	
14 & 16		26,976.56	18,344.80	
17		5,588.50	4,642.82	
18		5,588.50	4,642.82	
19		4,271.70	3,363.16	
20		1,316.80	1,279.66	
21		5,267.21	5,118.62	
25		10,855.71	9,761.44	14,117.50    10,196.00

**Reference(s)**

# User Instructions



STEP	INSTRUCTIONS	INPUT DATA/UNITS	KEYS	OUTPUT DATA/UNITS
1	Load Program - Sides 1 and 2			
2	Store Base Period Income Line 4, Schedule G (Form 1040)		STO B STO C STO D STO E	
3	Enter Taxable Income - Current Year  For Joint Return For Married Filing Separately		A B	
	To Calculate Tax When <u>Averaging is not Involved</u>			
1	Load Program - Sides 1 and 2			
2	Enter Taxable Income			
3	For Joint Return For Married Filing Separately		C D	

# Program Listing I

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STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	LBL A	31 25 11	Joint Return  Married Separate Return  Store Taxable		STO 3	33 03	Clear Tax Register  If Filing Separately, Multiply By 2
	CF 0	35 61 00			2	02	
	GTO 3	22 03			F ? 0	35 71 00	
	LBL B	31 25 12		060	STO X 0	33 71 00	
	SF 0	35 51 00			3	03	
	LBL 3	31 25 03			2	02	
	STO A	33 11			0	00	
	RCL E	34 15			0	00	
	RCL D	34 14			STO - 0	33 51 00	
010	+	61			GSB 9	31 22 09	
	RCL C	34 13	Calculate Amount  Not Averagable		GSB 9	31 22 09	Deduct Zero Bracket Amount
	+	61			GSB 9	31 22 09	
	RCL B	34 12			GSB 9	31 22 09	
	+	61		070	4	04	
	.	83			STO X 4	33 71 04	
	3	03			2	02	
	X	71			STO 7	33 07	
	<del>X</del>	31 84			GSB 9	31 22 09	
	STO 5	33 05				3	03
020	-	51			STO 7	33 07	Increase Bracket Increment
	<del>X</del>	31 84	Line 11		GSB 9	31 22 09	
	STO 6	33 06			GSB 9	31 22 09	
	3	03			GSB 9	31 22 09	
	EEX	43		080	4	04	
	3	03			STO 7	33 07	
	<del>X &gt; Y</del>	32 81			GSB 9	31 22 09	
	GTO 0	22 00			GSB 9	31 22 09	
	RCL 5	34 05				3	03
	<del>X</del>	31 84			STO 7	33 07	
030	RCL 6	34 06	Line 12		GSB 9	31 22 09	Changes
	.	83			GSB 9	31 22 09	
	2	02			GSB 9	31 22 09	
	X	71			GSB 9	31 22 09	
	<del>X</del>	31 84		090	2	02	
	+	61			STO 7	33 07	
	<del>X</del>	31 84			STO X 4	33 71 04	
	STO 0	33 00			GSB 9	31 22 09	
	SF 2	35 51 02				2	02
	CF 1	35 61 01			STO $\div$ 4	33 81 04	
040	GTO 1	22 01	Line 13			3	03
	LBL 2	31 25 02			STO X 4	33 71 04	To
	STO 9	33 09			STO 7	33 07	
	<del>X</del>	31 84			GSB 9	31 22 09	
	RCL 5	34 05		100	2	02	Tax
	LBL 1	31 25 01			STO 7	33 07	
	STO 0	33 00			GSB 9	31 22 09	
	1	01				3	03
	3	03			STO 7	33 07	
	STO 2	33 02			GSB 9	31 22 09	
050	1	01	Line 14			2	02
	STO 7	33 07			STO 7	33 07	Bracket
	1	01			GSB 9	31 22 09	
	EEX	43				3	03
	3	03		110	STO $\div$ 4	33 81 04	
	STO 4	33 04				5	05
	0	00			STO X 4	33 71 04	

## REGISTERS

0 Taxable	1 -	2 Tax Rate	3 Tax	4 Bracket Increment	5 Not Averagable	6 Averagable	7 Rate Increment	8	9 Line 18
S0 -	S1 -	S2 -	S3 -	S4 -	S5 -	S6 -	S7 -	S8 -	S9 -
A Current Year Taxable	B Base Period Income	C Base Period Income	D Base Period Income	E Base Period Income	I -				

# Program Listing II

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
	GSB 9	31 22 09					
	GSB 9	31 22 09					
	GSB 9	31 22 09					
	GSB 9	31 22 09					
	1	01					
	STO 7	33 07					
	GSB 9	31 22 09					
120	9	09					
	9	09					
	STO X 4	33 71 04					
	LBL 9	31 25 09					
	RCL 7	34 07					
	STO + 2	33 61 02					
	RCL 4	34 04					
	STO - 0	33 51 00					
	RCL 2	34 02					
	%	31 82					
130	STO + 3	33 61 03					
	RCL 0	34 00					
	$\Sigma > 0$	31 82					
	RTN	35 22					
	RCL 2	34 02					
	%	31 82					
	STO + 3	33 61 03					
	2	02					
	F ? 0	35 71 00					
	STO ÷ 3	33 81 03					
140	RCL 3	34 03	For Tax Only Calculation				
	F ? 1	35 71 01					
	R/S	84	Stop				
	$\bar{x}$	31 84	Line 17, 18, 19, 22				
	F ? 2	35 71 02					
	GTO 2	22 02	To Calc. Line 19				
	RCL 9	34 09					
	-	51					
	CHS	42					
	$\bar{x}$	31 84	Line 20				
150	4	04					
	X	71	Line 21				
	$\bar{x}$	31 84					
	RCL 9	34 09					
	+	61					
	R/S	84	Display Line 25				
	LBL C	31 25 13					
	CF 0	35 61 00					
	GTO 5	22 05					
	LBL D	31 25 14					
160	SF 0	35 51 00	For Calculating Tax Without Averaging				
	LBL 5	31 25 05					
	STO 0	33 00					
	SF 1	35 51 01					
	GTO 1	22 01					
	R/S	84	Display Tax W/O Averaging				

**LABELS**

A 001	B 004	C 156	D 159	E -	0 Used
a -	b -	c -	d -	e -	1 Used
0 -	1 046	2 042	3 006	4 -	2 Used
5 161	6 -	7 -	8 -	9 124	3 -

**FLAGS**

FLAGS		SET STATUS	
TRIG		DISP	
ON	OFF	DEG	X
1	0	GRAD	□
2	1	RAD	□
3	2	SCI	□
		ENG	□
		n	2

# Program Description I

Program Title	Federal Estate/Gift Tax - 1977 and Later		
Contributor's Name	Howard B. Kutner, CPA		
Address	370 Lexington Avenue - Rm 909	State	New York
City	New York	Zip Code	10017

**Program Description, Equations, Variables** This program utilizes a mathematical formula to represent the Federal Estate/Gift Tax Rate Table enacted by the Revenue Act of 1976 and effective for 1977 and later years. It enables the user to obtain the tax for any taxable amount by pressing a single function key. The top bracket Tax Rate may then be determined by simply pressing another key.

$$T = i R - D \quad R = .01 (R_1 + N\Delta R)$$

$$D = 10 \left[ \left( \frac{N^2+N}{2} \right) \Delta R \Delta i + N \Delta R i_1 + T_1 \right]$$

$$N = \text{INT} \left( \frac{i - i_1}{\Delta i} \right)$$

Table of Constants within Various Brackets of  $i$  ( $i = \frac{\text{Taxable}}{1000}$ )

Range of $i$	$i_1$	$\Delta i$	$R_1$	$\Delta R$	$T_1$	D
0 to 20	0	10	18	2	0	-
20 to 40	--	--	22	-	-	600
40 to 100	40	20	24	2	140	-
100 to 150	--	00	30	-	-	6200
150 to 250	--	00	32	-	-	9200
250 to 500	--	00	34	-	-	14200
500 to 1500	500	250	37	2	2920	-
1500 to 4500	1500	500	45	4	11920	-
4500 to 5000	--	--	69	-	-	89920
5000 and over	--	--	70	-	-	94920

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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# Program Description II

**Sketch(es)**

Transfers made by the individual during life and at death are cumulated and subject to one unified tax schedule. The rates for gifts made after '76 and estates of decedents dying after that date are as follows:

Amount	Amount of tax 18% of amount	Rate on excess
Up to \$10,000		
10,000	1,800	20%
20,000	3,800	22
40,000	8,200	24
60,000	13,000	26
80,000	18,200	28
100,000	23,800	30
150,000	38,800	32
250,000	70,800	34
500,000	155,800	37
750,000	248,300	39
1,000,000	345,800	41
1,250,000	448,300	43
1,500,000	555,800	45
2,000,000	780,800	49
2,500,000	1,025,800	53
3,000,000	1,290,800	57
3,500,000	1,575,800	61
4,000,000	1,880,800	65
4,500,000	2,205,800	69
5,000,000	2,550,800	70

**Sample Problem(s)**

Find the Federal Estate/Gift Tax for the following Transfers:

- |                 |  |
|-----------------|--|
| a) 11,123.00    | Also determine the Top Tax Rate in each case |
| b) 31,234.00    |  |
| c) 72,568.00    |  |
| d) 125,372.00   |  |
| e) 178,461.00   |  |
| f) 461,569.00   |  |
| g) 1,321,768.00 |  |
| h) 3,751,234.00 |  |
| i) 4,802,641.00 |  |

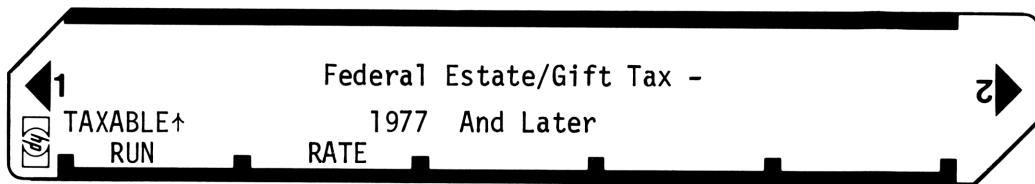
j) 10,374,621.00

	Tax	Rate	Tax	Rate
a)	2,024.60	20%	f) 142,733.46	34%
b)	6,271.48	22%	g) 479,160.24	43%
c)	16,267.68	26%	h) 1,729,052.74	61%
d)	31,411.60	30%	i) 2,414,622.29	69%
e)	47,907.52	32%	j) 6,313,034.70	70%

**Reference(s)**

Tax Reform Act of 1976 - Sec 2001 (c)

# User Instructions



# 97 Program Listing I

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	*LBLA	21 11		057	GSBc	23 16 13	
002	DSP2	-63 02		058	6	06	
003	CF0	16 22 00		059	-	-45	
004	EEX	-23		060	GT00	22 00	
005	3	03		061	*LBL7	21 07	
006	÷	-24		062	X <sup>2</sup> Y	-41	
007	ST01	35 01		063	3	03	
008	2	02	Branch routine for various brackets	064	GSBc	23 16 13	100 < i < 150 calculations
009	5	05		065	6	06	
010	0	00		066	2	02	
011	ST03	35 03		067	-	-45	
012	X>Y?	16-34		068	GT00	22 00	
013	GT00	22 00	i < 250	069	*LBL6	21 06	
014	2	02		070	X <sup>2</sup> Y	-41	
015	x	-35		071	3	03	
016	ST02	35 02		072	.	-62	
017	X>Y?	16-34		073	2	02	
018	GT01	22 01	250 < i < 500	074	GSBc	23 16 13	
019	3	03		075	9	09	
020	x	-35		076	2	02	
021	X>Y?	16-34		077	-	-45	
022	GT02	22 02	500 < i < 1500	078	GT00	22 00	
023	3	03		079	*LBL1	21 01	
024	x	-35		080	X <sup>2</sup> Y	-41	
025	X>Y?	16-34		081	3	03	
026	GT03	22 03	1500 < i < 4500	082	.	-62	
027	CLX	-51		083	4	04	
028	5	05		084	GSBc	23 16 13	
029	EEX	-23		085	1	01	
030	3	03		086	4	04	
031	X>Y?	16-34		087	2	02	
032	GT04	22 04	4500 < i < 5000	088	-	-45	
033	GT05	22 05	i > 5000	089	GT00	22 00	
034	*LBL0	21 00		090	*LBL4	21 04	
035	EEX	-23		091	X <sup>2</sup> Y	-41	
036	2	02		092	6	06	
037	-	-45		093	.	-62	
038	X≤Y?	16-35		094	9	09	
039	GT06	22 06	150 < i < 250	095	GSBc	23 16 13	
040	CLX	-51		096	8	08	
041	LSTX	16-63		097	9	09	
042	X≤Y?	16-35		098	9	09	
043	GT07	22 07	100 < i < 150	099	2	02	
044	CLX	-51		100	-	-45	
045	4	04		101	GT00	22 00	
046	0	00		102	*LBL5	21 05	
047	X≤Y?	16-35		103	X <sup>2</sup> Y	-41	
048	GT08	22 08	40 < i < 100	104	7	07	
049	2	02		105	GSBc	23 16 13	
050	÷	-24		106	9	09	
051	X>Y?	16-34		107	4	04	
052	GT09	22 09		108	9	09	
053	X <sup>2</sup> Y	-41		109	2	02	
054	2	02		110	-	-45	
055	.	-62		111	*LBL0	21 00	
056	2	02			EEX	-23	
				REGISTERS	112		

0	<sup>1</sup> Taxable Amt/1000	<sup>2</sup> i <sub>1</sub>	<sup>3</sup> Δi	<sup>4</sup> R <sub>1</sub>	<sup>5</sup> ΔR	<sup>6</sup> T <sub>1</sub>	<sup>7</sup> N	<sup>8</sup>	<sup>9</sup> R
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A	B	C	D	E	F	G	H	I	J

# 97 Program Listing II

55

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
113	2	02		169	-	-45	
114	x	-35		170	RCL3	36 03	
115	FTN	24		171	=	-24	
116	*LBL2	21 02	500 < i < 1500	172	INT	16 34	
117	3	03		173	ST07	35 07	
118	7	07	set constants	174	X <sup>2</sup>	53	
119	ST04	35 04		175	LSTX	16-63	
120	2	02		176	+	-55	
121	9	09		177	RCL3	36 03	
122	2	02		178	x	-35	
123	ST06	35 06		179	F0?	16 23 00	
124	GT01	22 01		180	GSB0	23 00	
125	*LBL8	21 08	40 < i < 100	181	RCL7	36 07	
126	2	02		182	RCL2	36 02	
127	0	00	set constants	183	x	-35	
128	ST03	35 03		184	GSB0	23 00	
129	GSB0	23 00		185	F0?	16 23 00	
130	ST02	35 02		186	GSB0	23 00	
131	2	02		187	+	-55	
132	4	04		188	RCL6	36 06	
133	ST04	35 04		189	1	01	
134	1	01		190	0	00	
135	4	04		191	x	-35	
136	ST06	35 06		192	+	-55	
137	GT01	22 01		193	RCL4	36 04	
138	*LBL9	21 09	i < 20	194	RCL7	36 07	
139	0	00		195	GSB0	23 00	
140	ST02	35 02	Set constants	196	F0?	16 23 00	
141	ST06	35 06		197	GSB0	23 00	
142	1	01		198	+	-55	
143	0	00		199	ST09	35 09	
144	ST03	35 03		200	RCL1	36 01	
145	1	01		201	x	-35	
146	8	08		202	R↑	16-31	
147	ST04	35 04		203	-	-45	
148	GT01	22 01		204	1	01	
149	*LBL3	21 03		205	0	00	
150	SF0	16 21 00	1500 < i < 4500	206	x	-35	
151	5	05	Set constants	207	RTN	24	
152	0	00		208	*LBL0	21 00	
153	0	00		209	2	02	
154	ST03	35 03		210	x	-35	
155	3	03		211	RTN	24	
156	x	-35		212	*LBL8	21 12	
157	ST02	35 02		213	RCL9	36 09	
158	4	04		214	DSP0	-63 00	
159	5	05		215	RTN	24	
160	ST04	35 04		216	*LBL0	21 16 13	
161	1	01		217	EEX	-23	
162	1	01		218	3	03	
163	9	09		219	%	55	
164	2	02		220	ST09	35 09	
165	ST06	35 06		221	CLX	-51	
166	*LBL1	21 01	formula calculation	222	+	-55	
167	RCL1	36 01		223	x	-35	
168	RCL2	36 02		224	RTN	24	
LABELS							
SET STATUS							
A	RUN	B	C	D	E	0	Δ R = 4
a	b	c	d	e		1	ON OFF
0	Used	1500 < i < 2500 Tax Calc	2500 < i < 3500 3500 < i < 4500	4500 < i < 5500 5500 < i < 6500	2	1	DEG GRAD RAD
5	i > 5000	150 < i < 50	100 < i < 150	80 < i < 100	9	2	SCI ENG
					3	3	n

FLAGS	TRIG	DISP
ON OFF		
DEG GRAD RAD		
SCI ENG		
n		

# Program Description I

Program Title Federal Estate Tax Credit for State Taxes Paid

Contributor's Name Howard B. Kutner, CPA

Address 370 Lexington Avenue - Rm 909

City New York

State N.Y.

Zip Code 10017

**Program Description, Equations, Variables** This program utilizes a mathematical formula to represent the Federal Table of Estate Tax Credit allowable for State Inheritance Taxes Paid. It enables the user to obtain the maximum allowable credit for a given taxable estate by pressing a single function key. The top bracket rate of credit may then be determined by simply pressing another key

$$N = \text{INT} \left( \frac{i-i_1}{\Delta i} \right)$$

Credit =  $(i R - D) 10^2$  where:

$$R = (R_1 + N\Delta R)$$

$$D = \left[ \left( \frac{N^2 + N}{2} \right) \Delta R \Delta i + N \Delta R i_1 + T_1 \right]$$

$$i = (\text{Taxable Estate}/100,000) - .4$$

Table of Constants Within Various Brackets of  $i$

Range of $i$	$R_1$	$\Delta R$	$i_1$	$\Delta i$	$T_1$	$D$
0 to 1	8	8	0	.5	0	-
1 to 2	24	-	-	-	-	12
2 to 10	32	8	2	2	28	-
10 to 40	64	8	10	5	252	-
40 to 100	112	8	40	10	1572	-
Over 100	160	-	-	-	-	5172

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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# Program Description II

Sketch(es)

**TABLE FOR COMPUTATION OF MAXIMUM CREDIT  
FOR STATE DEATH TAXES**

(A) Taxable estate equal to or more than—	(B) Taxable estate less than—	(C) Credit on amount in col- umn (A)	(D) Rates of credit on excess over amount in column (A)
Percent			
\$ 40,000	\$ 90,000	\$ .....	.8
90,000	140,000	\$ 400	1.6
140,000	240,000	1,200	2.4
240,000	440,000	3,600	3.2
440,000	640,000	10,000	4.
640,000	840,000	18,000	4.8
840,000	1,040,000	27,600	5.6
1,040,000	1,540,000	38,800	6.4
1,540,000	2,040,000	70,800	7.2
2,040,000	2,540,000	106,800	8.
2,540,000	3,040,000	146,800	8.8
3,040,000	3,540,000	190,800	9.6
3,540,000	4,040,000	238,800	10.4
4,040,000	5,040,000	290,800	11.2
5,040,000	6,040,000	402,800	12.
6,040,000	7,040,000	522,800	12.8
7,040,000	8,040,000	650,800	13.6
8,040,000	9,040,000	786,800	14.4
9,040,000	10,040,000	930,800	15.2
10,040,000	.....	1,082,800	16.

Sample Problem(s)

Find the maximum credit for State Death Taxes allowable for the following Taxable estates, and the Top bracket rate.

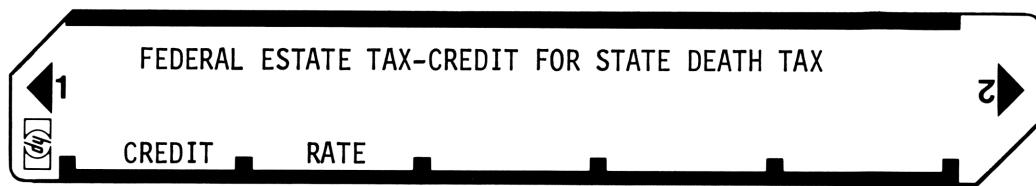
- |    |         |    |            |
|----|---------|----|------------|
| a) | 30,000  | e) | 3,246,871  |
| b) | 70,462  | f) | 8,651,783  |
| c) | 195,586 | g) | 12,146,869 |
| d) | 762,391 |    |            |

Solution(s)

- |    |              |       |
|----|--------------|-------|
| a) | 0            | 0%    |
| b) | 243.70       | 0.8%  |
| c) | 2,534.06     | 2.4%  |
| d) | 23,874.77    | 4.8%  |
| e) | 210,659.62   | 9.6%  |
| f) | 874,896.75   | 14.4% |
| g) | 1,419,899.04 | 16.0% |

Reference(s)

# User Instructions



# 97 Program Listing I

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	*LBL1e	21 16 15		057	.	-62	
002	RCL1	36 01		058	5	05	
003	RCL2	36 02		059	ST03	35 03	
004	-	-45		060	RCL1	36 01	
005	RCL3	36 03		061	2	02	
006	÷	-24		062	X>Y?	16-34	
007	INT	16 34		063	GT00	22 00	
008	ST07	35 07		064	8	08	
009	X <sup>2</sup>	53		065	+	-55	
010	LSTX	16-63		066	X>Y?	16-34	
011	+	-55		067	GT01	22 01	
012	2	02		068	3	03	
013	÷	-24		069	0	00	
014	RCL3	36 03		070	+	-55	
015	X	-35		071	X>Y?	16-34	
016	RCL5	36 05		072	GT02	22 02	
017	X	-35		073	6	06	
018	RCL7	36 07		074	0	00	
019	RCL2	36 02		075	+	-55	
020	X	-35		076	X>Y?	16-34	
021	RCL5	36 05		077	GT03	22 03	
022	X	-35		078	CLX	-51	
023	+	-55		079	1	01	
024	X <sup>2</sup> Y	-41		080	6	06	
025	+	-55		081	0	00	
026	RCL4	36 04		082	X	-35	
027	RCL7	36 07		083	5	05	
028	RCL5	36 05		084	1	01	
029	X	-35		085	7	07	
030	+	-55		086	2	02	
031	ST09	35 09		087	GT04	22 04	
032	RCL1	36 01		088	*LBL1	21 01	
033	X	-35		089	4	04	
034	RT↑	16-31		090	STx4	35-35 04	
035	-	-45		091	2	02	
036	EEX	-23		092	ST02	35 02	
037	2	02		093	ST03	35 03	
038	X	-35		094	2	02	
039	RTN	24		095	8	08	
040	*LBL1A	21 11		096	GT0e	22 16 15	
041	DSP2	-63 02		097	*LBL2	21 02	
042	ST00	35 00		098	8	08	
043	EEX	-23		099	STx4	35-35 04	
044	5	05		100	1	01	
045	÷	-24		101	0	00	
046	.	-62		102	ST02	35 02	
047	4	04		103	5	05	
048	-	-45		104	ST03	35 03	
049	ST01	35 01		105	2	02	
050	CLX	-51		106	5	05	
051	ST02	35 02		107	2	02	
052	ST06	35 06		108	GT0e	22 16 15	
053	ST09	35 09		109	*LBL3	21 03	
054	8	08		110	1	01	
055	ST05	35 05		111	4	04	
056	ST04	35 04		112	STx4	35-35 04	

REGISTERS

Taxable Estate	<sup>1</sup> i	<sup>2</sup> i <sub>1</sub>	<sup>3</sup> Δi	<sup>4</sup> R <sub>1</sub>	<sup>5</sup> ΔR	<sup>6</sup> T <sub>1</sub>	<sup>7</sup> N	<sup>8</sup>	<sup>9</sup> Rate
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A	B	C	D	E		I			

## 97 Program Listing II

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
113	4	04					
114	0	00		170			
115	ST02	35 02	Store Constants for $i < i_0$				
116	1	01					
117	0	00					
118	ST03	35 03					
119	1	01					
120	5	05					
121	7	07					
122	2	02					
123	GT0e	22 16 15		180			
124	*LBL0	21 00					
125	1	01					
126	-	-45					
127	X>Y?	16-34					
128	GT00	22 00					
129	CLX	-51					
130	2	02					
131	4	04					
132	X	-35					
133	1	01		190			
134	2	02					
135	GT04	22 04					
136	*LBL0	21 00					
137	LSTX	16-63					
138	-	-45					
139	X≤Y?	16-35					
140	GT0e	22 16 15					
141	0	00					
142	ST09	35 05					
143	RTN	24		200			
144	*LBL4	21 04					
145	LSTX	16-63					
146	ST09	35 09					
147	R↓	-31					
148	-	-45					
149	EEX	-23					
150	2	02					
151	X	-35					
152	RTN	24					
153	*LBLB	21 12		210			
154	DSP1	-63 01					
155	RCL9	36 09					
156	.	-62					
157	1	01					
158	X	-35					
159	RTN	24					
160				220			

## LABELS

## FLAGS

## SET STATUS

A	B	C	D	E	0	FLAGS	TRIG	DISP
Credit	Rate	c	d	e used	1	ON OFF 0 <input type="checkbox"/> <input checked="" type="checkbox"/> 1 <input type="checkbox"/> <input checked="" type="checkbox"/> 2 <input type="checkbox"/> <input checked="" type="checkbox"/> 3 <input type="checkbox"/> <input checked="" type="checkbox"/>	DEG <input checked="" type="checkbox"/> GRAD <input type="checkbox"/> RAD <input type="checkbox"/>	FIX <input checked="" type="checkbox"/> SCI <input type="checkbox"/> ENG <input type="checkbox"/> n <input checked="" type="checkbox"/>
0 used	1 used	2 used	3 used	4 used	2			
5	6	7	8	9	3			

# Program Description I

Program Title Estate/Gift Tax Portfolio Valuation

Contributor's Name	Howard B. Kutner, CPA		
Address	370 Lexington Avenue - Rm 909		
City	New York	State	N.Y.
			Zip Code 10017

**Program Description, Equations, Variables**

This program determines the interpolated price of a security on a date when no quotations are available in accordance with Internal Revenue Service Regulations for Gift and Estate Tax valuation. It accepts High and low quotes for preceding and following trading dates in any sequence and interpolates according to the number of days in each Time period. The interpolated price is displayed and used to value the quantity of shares held. Values are accumulated to provide a portfolio total.

Protection is provided against more than 2 quotes (High and Low) on each date.

A count of correctly processed portfolio items is maintained and displayed after any error correction. It may also be recalled independently. Accumulated Value is not affected by input errors and processing may be resumed following error correction.

Quoted prices may be entered in any sequence and if any are similar the figures do not have to be reentered before depressing the key for the second entry.

**Operating Limits and Warnings** Interpolated prices on Valuation Date are displayed to 5 decimal places but retain 10 place accuracy in determining security value. Security value is rounded to penny accuracy.

# of shares must be entered during 1 second pause for display of calculated price - not while computer is cycling.

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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# Program Description II

**Sketch(es)**

--

- Sample Problem(s)**
- a) Preceding Trade date      8/13/76 (Friday)
  - b) Valuation date                8/14/76 (Saturday)
  - c) Following Trade date      8/16/76 (Monday)

$$n = b-a = 1$$

$$N = c-a = 3$$

	8/13/76		8/16/76	
	<u>L0</u>	<u>HI</u>	<u>L0</u>	<u>HI</u>
100 sh ABC	3	5	9	11
300 sh DEF	7	8	6	6 1/2
500 sh GHI	13	13 1/4	14 1/8	15

**Solution(s)**

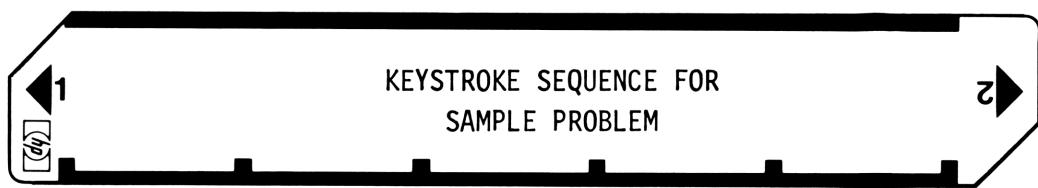
	<u>Valuation Price</u>	<u>Value</u>
100 sh ABC	6.00000	600.00
300 sh DEF	7.08333	2,125.00
500 sh GHI	13.60417	<u>6,802.08</u>
	<b>TOTAL</b>	<b><u>9,527.08</u></b>

Keystroke "D" -----> # of items

**Reference(s)**

Internal Revenue Code and Regulations 20.2031-2(b)  
 relating to Estate Tax  
 and Regulations 25.2512-2(b)  
 relating to Gift Tax

# User Instructions



STEP	INSTRUCTIONS	INPUT DATA/UNITS	KEYS	OUTPUT DATA/UNITS
1.	Enter program			
2.	a) enter n = days from last quote to valuation	1	ENTER	1.00
	b) enter N = days between quote dates	3	f e	0.00
3.	Select Print Mode		C	1.00
4.	a) Enter early quote	3	A	3.00
	a) ✓ ✓ ✓	5	A	5.00
	b) ✓ later ✓	9	B	9.00
	b) ✓ ✓ ✓	11	B	6.00000
	d) Enter # of shares	100		600.00
4.	a) Enter Early quote	7	A	7.00
	a) ✓ ✓ ✓	8	A	8.00
	b) ✓ later ✓	6	B	6.00
	b) ✓ ✓ ✓	6.5	B	7.08333
	d) Enter # of shares	300		2125.00
4.	a) Enter Early quote	13	A	13.00
	a) ✓ ✓ ✓	13.25	A	13.25
	b) ✓ later ✓	14.125	B	14.13
	b) ✓ ✓ ✓	15	B	13.60417
	d) Enter # of shares	500		6802.08
5.	Display accumulated total		E	9527.08
6.	Display last valid item #		D	3.00
		1. *** 100. *** 6.00000 *** 600.00 ***		
		2. *** 300. *** 7.08333 *** 2125.00 ***		
		3. *** 500. *** 13.60417 *** 6802.08 ***		
		9527.08 ***		

# User Instructions

## ESTATE/GIFT TAX-PORTFOLIO VALUATION

# 97 Program Listing I

65

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	*LBL3	21 03		057	*LBL0	21 00	
002	ST09	35 09		058	R↓	-31	
003	GSBD	23 14		059	RTN	24	
004	RCL8	36 08		060	*LBL0	21 14	
005	RCL9	36 09		061	4	04	
006	DSP2	-63 02		062	ST01	35 46	
007	X	-35		063	3	03	
008	RND	16 24		064	ST04	35 04	
009	ST+3	35-55 03		065	ST05	35 05	
010	1	01		066	CLX	-51	
011	ST+6	35-55 06		067	ST01	35 01	
012	R↓	-31		068	ST02	35 02	
013	F0?	16 23 00		069	RCL6	36 06	
014	GT04	22 04		070	RTN	24	
015	RTN	24		071	*LBL0	21 16 15	
016	*LBLA	21 11		072	÷	-24	
017	ST+1	35-55 01		073	ST07	35 07	
018	RCL4	36 04		074	GSBD	23 14	
019	1	01		075	0	00	
020	-	-45		076	ST06	35 06	
021	ST04	35 04		077	ST03	35 03	
022	GT01	22 01		078	RTN	24	
023	*LBLB	21 12		079	*LBL0	21 15	
024	ST+2	35-55 02		080	RCL3	36 03	
025	RCL5	36 05		081	F0?	16 23 00	
026	1	01		082	GT00	22 00	
027	-	-45		083	RTN	24	
028	ST05	35 05		084	*LBL0	21 00	
029	*LBL1	21 01		085	PRTX	-14	
030	0	00		086	SPC	16-11	
031	X=Y?	16-33		087	SPC	16-11	
032	÷	-24		088	RTN	24	
033	R↓	-31		089	*LBL4	21 04	
034	DSZI	16 25 46		090	DSP0	-63 00	
035	GT00	22 00		091	RCL6	36 06	
036	RCL2	36 02		092	PRTX	-14	
037	RCL1	36 01		093	RCL9	36 09	
038	-	-45		094	PRTX	-14	
039	RCL7	36 07		095	DSP5	-63 05	
040	X	-35		096	RCL8	36 08	
041	RCL1	36 01		097	PRTX	-14	
042	+	-55		098	DSP2	-63 02	
043	2	02		099	R↑	16-31	
044	÷	-24		100	PRTX	-14	
045	3	03		101	SPC	16-11	
046	CHS	-22		102	RTN	24	
047	ST01	35 46		103	*LBL0	21 13	
048	CLX	-51		104	SF0	16 21 00	
049	+	-55		105	1	01	
050	DSP5	-63 05		106	RTN	24	
051	ST08	35 08		107	*LBL0	21 13	
052	CF3	16 22 03		108	CF0	16 22 00	
053	PSE	16 51		109	0	00	
054	F3?	16 23 03		110	RTN	24	
055	GT03	22 03					
056	GT01	22 45					

## REGISTERS

0	1 <sup>earlier quotes</sup>	2 <sup>later quotes</sup>	3 <sup>Accum Total Value</sup>	4 <sup>entry counter</sup>	5 <sup>entry counter</sup>	6 <sup>item counter</sup>	7 <sup>n/N</sup>	8 <sup>Price</sup>	9 <sup># Shares</sup>
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A	B	C		D	E			I <sup>Entry Counter</sup>	

## **NOTES**

## **NOTES**

## **NOTES**

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**Cardiac**  
**Pulmonary**  
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(SCHEDULE X)

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