Calculator Steps
Solutions to Odd-Numbered Study Questions

Chapter 8

NOTE: Not all steps need to be repeated in every question. Calculator registers retain prior values until changed, and even after the calculator is turned off.

8.3

HP-10B	**HP-12C**	**TI-BAII PLUS**
CLEAR ALL	CLX	CLR_TVM
1 P/YR	2 n	P/Y=1 ENTER QUIT
2 N	12 i	2 N
12 I/YR	15000 FV	12 I/Y
0 PMT	PV gives 11957.91	0 PMT
15000 FV		15000 FV
PV gives -11957.91		CPT PV = -11957.91

8.5

HP-10B	**HP-12C**	**TI-BAII PLUS**
CLEAR ALL	CLX	CLR_TVM
1 P/YR	2 n	P/YR=1 ENTER QUIT
2 N	12 i	2 N
12 I/YR	20000 PV	12 I/Y
20000 PV	FV gives 25088	0 PMT
0 PMT		20000 PV
FV gives 25088		CPT FV = 25088

8.7

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	CLR_TVM
12 P/YR	12 g i	P/Y=12 ENTER QUIT
12 N	12 n	12 N
12 I/YR	15000 FV	12 I/Y
0 PMT	PV gives 13311.74	0 PMT
15000 FV		15000 FV
PV gives 13311.74		CPT PV = 13311.74

8.11

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	I_Conv
12 P/YR	.08 ENTER	NOM = 8 ENTER ↓ ↓ CPT
8 I/YR	12 ÷	C/Y = 12 ENTER ↑
EFF% gives 8.30	1 +	CPT EFF = 8.30
	12 y^x	
	1 – gives .0830	

8.13

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	I_Conv
2 P/YR	.08 ENTER	NOM = 8 ENTER ↓ ↓ CPT
8 I/YR	2 ÷	C/Y = 2 ENTER ↑
EFF% gives 8.16	1 +	CPT EFF = 8.16
	2 y^x	
	1 – gives .0816	

8.15

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL		
2 P/YR		
10 I/YR		
EFF% gives 10.25		
12 P/YR		
NOM% gives 9.80		

8.17

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL		
12 P/YR		
10 I/YR		
EFF% gives 10.47		
2 P/YR		
NOM% gives 10.21		

8.19

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	I_Conv
999 P/YR	.08 ENTER	NOM = 8 ENTER ↓ ↓
8 I/YR	999 ÷	C/Y = 999 ENTER ↑
EFF% gives 8.33	1 +	CPT EFF = 8.3284
ALTERNATIVE (more acc.)	999 y^x	ALTERNATIVE (more acc.)
.08 e^x gives 1.083287	1 – gives .083287	.08 e^x gives 1.083287
– 1 = .083287 =8.33%	ALTERNATIVE (more acc.)	– 1 = .083287 =8.33%
	.08 e^x gives 1.083287	
	1 – gives .083287 =8.33%	

8.21

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	CLR_TVM
1 P/YR	5 n	P/Y = 1 ENTER QUIT
5 N	15000 CHS PV	5 N
15000 +/– PV	30000 FV	15000 +/– PV
0 PMT	I gives 14.87	0 PMT
30000 FV		30000 FV
I/YR gives 14.87		CPT I/Y gives 14.87

8.23

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	CR_TVM
12 P/YR	60 n	P/Y = 12 ENTER QUIT
60 N	15000 CHS PV	60 N
15000 +/– PV	30000 FV	15000 +/– PV
0 PMT	I gives 1.161944 ENTER	0 PMT
30000 FV	12 X gives 13.94	30000 FV
I/YR gives 13.94		CPT I/Y gives 13.94

8.27

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	CLR_TVM
1 P/YR	10 i	P/Y = 1 ENTER QUIT
10 I/YR	15000 CHS PV	10 I/Y
15000 +/– PV	0 PMT	15000 +/– PV
0 PMT	30000 FV	0 PMT
30000 FV	n gives 8.0	30000 FV
N gives 7.27	Note: HP–12c rounds up to next whole period. Not as accurate.	CPT N gives 7.27

8.29

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	CLR_TVM
12 P/YR	10 g i	P/Y = 12 ENTER QUIT
10 I/YR	15000 CHS PV	10 I/Y
15000 +/– PV	30000 FV	15000 +/– PV
0 PMT	n gives 84	0 PMT
30000 FV	12 ÷ gives 7	30000 FV
N gives 83.52	Rounds up.	CPT N gives 83.52
÷12 gives 6.96		÷12 gives 6.96

8.33

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	CLR_TVM
1 P/YR	10 n	P/Y = 1 ENTER QUIT
10 N	g i	10 N
9 I/YR	15000 PMT	9 I/Y
15000 PMT	0 FV	15000 PMT
0 FV	PV gives –96264.86	0 FV
PV gives –96264.87		CPT PV gives –96264.87

8.35

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	CLR_TVM
12 P/YR	.09 ENTER	P/Y = 12 ENTER QUIT
9 I/YR	12 ÷	I Conv
EFF% gives 9.38	1 +	NOM = 9 ENTER ↓ ↓
1 P/YR	12 y^x	C/Y = 12 ENTER ↑
10 N	1 – gives .0938	CPT EFF=9.38
9.38 I/YR	9.38 i	P/Y = 1 ENTER QUIT
15000 PMT	15000 PMT	10 N
0 FV	10 n	9.38 I/Y
PV gives –94675.42	PV gives –94675.42	15000 PMT
		0 FV
		CPT PV gives –94675.42

8.37

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	CLR_TVM
12 P/YR	10 g n	P/Y = 12 ENTER QUIT
120 N	9 g i	120 N
9 I/YR	1250 PMT	9 I/Y
1250 PMT	0 FV	1250 PMT
0 FV	PV gives –98677.12	0 FV
PV gives –98677.12		CPT PV gives –98677.12

8.39

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	CLR_TVM
12 P/YR	10 g n	P/Y = 12 ENTER QUIT
120 N	9 g i	120 N
9 I/YR	1250 PMT	9 I/Y
1250 PMT	50000 FV	1250 PMT
50000 FV	PV gives –119073.98	50000 FV
PV gives –119073.98		CPT PV gives –119073.98

8.41

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	CLR_TVM
12 P/YR	25 g n	P/Y = 12 ENTER QUIT
300 N	10 g i	300 N
10 I/YR	80000 PV	10 I/Y
80000 PV	0 FV	80000 PV
0 FV	PMT gives –726.96	0 FV
PMT gives –726.96		CPT PMT gives –726.96

8.43

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	CLR_TVM
12 P/YR	10 g i	P/Y = 12 ENTER QUIT
10 I/YR	50000 PV	10 I/Y
50000 PV	500 CHS PMT	50000 PV
500 +/– PMT	0 FV	500 +/– PMT
0 FV	n gives 216	0 FV
N gives 215.9	Note: rounds up, not exact answer	CPT N gives 215.9

8.45

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL	CLX	LCR_TVM
12 P/YR	g BEG	P/Y = 12 ENTER QUIT
BEG/END (set to BEGIN)	5 g n	BGN SET (=BGN) QUIT
60 N	10 g i	60 N
10 I/YR	1000 PMT	10 I/Y
1000 PMT	0 FV	1000 PMT
0 FV	PV gives –47457.58	0 FV
PV gives –47457.58	g END	CPT PV gives –47457.58
BEG/END (toggle off BEG)		BGN SET (=END) QUIT

8.47

HP–10B	HP–12C	TI–BAII PLUS
CLEAR ALL		
12 P/YR		
60 N		
6 I/Y		
0 PV		
1000000 FV		
PMT gives –14332.80		

8.49

HP-10B		**TI-BAII PLUS**
CLEAR ALL, BEG/END=END		BGN SET (=END) ENTER QUIT
1 P/YR		P/Y = 1 ENTER QUIT
10 N		10 N
8 I/Y		8 I/Y
30 PMT		30 PMT
PV gives 201.30		CPT PV = 201.30
1.08/1.03-1=.0485X100=		1.08/1.03-1=.0485 X 100=
4.85437 I/Y		4.85437 I/Y
BEG/END = BEG		BGN SET (=BGN) ENTER QUIT
PMT gives 24.68713		CPT PMT = 24.68713
X 1.08 = 26.66		X 1.08 = 26.66
CLEAR ALL, BEG/END=END		BGN SET (=END) ENTER QUIT

8.53a

HP-10B	**HP-12C**	**TI-BAII PLUS**
CLEAR ALL	CLX	CLR_Work
1 P/YR	180000 CHS g CF0	CF
180000 +/- CFj	15000 g CFj	CF0 = 180000 +/- ENTER ↓
15000 CFj	16000 g CFj	CF1 = 15000 ENTER ↓ ↓
16000 CFj	20000 g CFj	CF2 = 16000 ENTER ↓ ↓
20000 CFj	20000 g CFj	CF3 = 20000 ENTER ↓ ↓
22000 CFj	22000 g CFj	CF4 = 22000 ENTER ↓ ↓
17000+200000=217000 CFj	17000 ENTER 200000 +	CF5 = 17000+200000=217000 ENTER
11 I/YR	gives 217000 g CFj	NPV
NPV gives 4394	11 i	I = 11 ENTER ↓
	f NPV gives 4394	CPT NPV gives 4394

8.53b

HP–10B	**HP–12C**	**TI–BAII PLUS**
CLEAR ALL	CLX	CLR_Work
1 P/YR	170000 CHS g CF0	CF
170000 +/– CFj	15000 g CFj	CF0 = 170000 +/– ENTER ↓
15000 CFj	16000 g CFj	CF1 = 15000 ENTER ↓ ↓
16000 CFj	20000 g CFj	CF2 = 16000 ENTER ↓ ↓
20000 CFj	20000 g CFj	CF3 = 20000 ENTER ↓ ↓
22000 CFj	22000 g CFj	CF4 = 22000 ENTER ↓ ↓
17000+200000=217000 CFj	17000 ENTER 200000 +	CF5 = 17000+200000=217000 ENTER
IRR gives 13.15%	gives 217000 g CFj	IRR CPT gives 13.15%
	IRR gives 13.15%	