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Program Title: Proforma Income Statement and Balance Sheet

File Name: INCOME

Contributor's Name

Company (if applicable)

Address

City

State/Country

Zip Code/Mail Code

Machine Size: 16K ☑ 32K ☐

Peripherals Required: none

ROMs Required: none

Number of Bytes: 6,937

Program Description: INCOME provides a listing of a simple proforma income statement and balance sheet.

User accepts and uses this program material AT HIS/HER OWN RISK, in reliance solely upon his/her 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.
Sample Problem (Sketch if Desired)

Generate income statement using following input data:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base period sales total</td>
<td>50000</td>
</tr>
<tr>
<td>Net fixed assets</td>
<td>450000</td>
</tr>
<tr>
<td>Remaining long term debt</td>
<td>35000</td>
</tr>
<tr>
<td>Total owner's equity</td>
<td>800000</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>31000</td>
</tr>
<tr>
<td>Federal corporate tax rate</td>
<td>.48</td>
</tr>
<tr>
<td>Projected quarterly dividends</td>
<td>80000</td>
</tr>
<tr>
<td>Quarterly retained cash</td>
<td>300000</td>
</tr>
<tr>
<td>Accounts receivable turnover</td>
<td>2.25</td>
</tr>
<tr>
<td>Inventory turnover</td>
<td>1.5</td>
</tr>
<tr>
<td>Accounts payable turnover</td>
<td>.20</td>
</tr>
<tr>
<td>Qtr 1</td>
<td></td>
</tr>
<tr>
<td>Qtr 2</td>
<td></td>
</tr>
<tr>
<td>Qtr 3</td>
<td></td>
</tr>
<tr>
<td>Qtr 4</td>
<td></td>
</tr>
<tr>
<td>Est. growth percentage sales</td>
<td>.1</td>
</tr>
<tr>
<td>Cost of goods sold as % sales</td>
<td>.48</td>
</tr>
<tr>
<td>G S &amp; A expense as % of sales</td>
<td>.1</td>
</tr>
<tr>
<td>Fixed asset purchases</td>
<td>2000</td>
</tr>
<tr>
<td>Fixed asset retirements</td>
<td>1000</td>
</tr>
<tr>
<td>Planned debt payments</td>
<td>2500</td>
</tr>
<tr>
<td></td>
<td>5000</td>
</tr>
<tr>
<td></td>
<td>1000</td>
</tr>
<tr>
<td></td>
<td>2500</td>
</tr>
<tr>
<td></td>
<td>2500</td>
</tr>
</tbody>
</table>

SOLUTION:

LOAD "INCOME"

RUN

Enter data as requested.

*** INCOME STATEMENT ***

<table>
<thead>
<tr>
<th>Quarter No. 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SALES</td>
<td>55000.00</td>
</tr>
<tr>
<td>COST OF GOODS SOLD</td>
<td>26400.00</td>
</tr>
<tr>
<td>GS AND A EXPENSES</td>
<td>5500.00</td>
</tr>
<tr>
<td>PROFIT BEFORE TAX</td>
<td>23100.00</td>
</tr>
<tr>
<td>FED. INCOME TAX</td>
<td>11088.00</td>
</tr>
<tr>
<td>PROFIT AFTER TAX</td>
<td>12012.00</td>
</tr>
<tr>
<td>ANNUAL DIVIDENDS</td>
<td>8000.00</td>
</tr>
</tbody>
</table>
SERIES 80 USERS' LIBRARY
PROGRAM DESCRIPTION II

QUARTER NO. 2

SALES 60500.00
COST OF GOODS SOLD 29645.00
GS AND A EXPENSES 7260.00
PROFIT BEFORE TAX 23595.00

FED. INCOME TAX 11325.60
PROFIT AFTER TAX 12269.40
ANNUAL DIVIDENDS 8000.00

QUARTER NO. 3

SALES 69575.00
COST OF GOODS SOLD 34787.50
GS AND A EXPENSES 8349.00
PROFIT BEFORE TAX 26438.50

FED. INCOME TAX 12690.48
PROFIT AFTER TAX 13748.02
ANNUAL DIVIDENDS 8000.00

QUARTER NO. 4

SALES 83490.00
COST OF GOODS SOLD 42579.90
GS AND A EXPENSES 10018.80
PROFIT BEFORE TAX 30891.30

FED. INCOME TAX 14827.82
PROFIT AFTER TAX 16063.48
ANNUAL DIVIDENDS 8000.00

*******************************************************************************
### Balance Sheet

#### Quarter No. 1

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>377488.89</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>12012.00</td>
</tr>
<tr>
<td>Inventory</td>
<td>36666.67</td>
</tr>
<tr>
<td>Total Current Assets</td>
<td>438600.00</td>
</tr>
<tr>
<td>Net Fixed Assets</td>
<td>451000.00</td>
</tr>
<tr>
<td>Total Assets</td>
<td>889600.00</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>11000.00</td>
</tr>
<tr>
<td>Accrued Taxes</td>
<td>11088.00</td>
</tr>
<tr>
<td>Total Current Liab.</td>
<td>22088.00</td>
</tr>
<tr>
<td>Debt Financing</td>
<td>32500.00</td>
</tr>
<tr>
<td>Equity</td>
<td>800000.00</td>
</tr>
<tr>
<td>Retained Earnings</td>
<td>35012.00</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>889600.00</td>
</tr>
</tbody>
</table>

#### Quarter No. 2

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>370484.78</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>12269.40</td>
</tr>
<tr>
<td>Inventory</td>
<td>40333.33</td>
</tr>
<tr>
<td>Total Current Assets</td>
<td>437707.00</td>
</tr>
<tr>
<td>Net Fixed Assets</td>
<td>455000.00</td>
</tr>
<tr>
<td>Total Assets</td>
<td>892707.00</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>12100.00</td>
</tr>
<tr>
<td>Accrued Taxes</td>
<td>11325.60</td>
</tr>
<tr>
<td>Total Current Liab.</td>
<td>23425.60</td>
</tr>
<tr>
<td>Debt Financing</td>
<td>30000.00</td>
</tr>
<tr>
<td>Equity</td>
<td>800000.00</td>
</tr>
<tr>
<td>Retained Earnings</td>
<td>39281.40</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>892707.00</td>
</tr>
</tbody>
</table>

#### Quarter No. 3

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>362829.34</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>13748.02</td>
</tr>
<tr>
<td>Inventory</td>
<td>46383.33</td>
</tr>
<tr>
<td>Total Current Assets</td>
<td>440134.90</td>
</tr>
<tr>
<td>Net Fixed Assets</td>
<td>459000.00</td>
</tr>
<tr>
<td>Total Assets</td>
<td>899134.90</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>13915.00</td>
</tr>
<tr>
<td>Accrued Taxes</td>
<td>12690.48</td>
</tr>
<tr>
<td>Total Current Liab.</td>
<td>26605.48</td>
</tr>
<tr>
<td>Debt Financing</td>
<td>27500.00</td>
</tr>
<tr>
<td>Equity</td>
<td>800000.00</td>
</tr>
<tr>
<td>Retained Earnings</td>
<td>45029.42</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>899134.90</td>
</tr>
</tbody>
</table>

#### Quarter No. 4

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>357852.05</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>16063.48</td>
</tr>
<tr>
<td>Inventory</td>
<td>55660.00</td>
</tr>
<tr>
<td>Total Current Assets</td>
<td>450618.72</td>
</tr>
<tr>
<td>Net Fixed Assets</td>
<td>459000.00</td>
</tr>
<tr>
<td>Total Assets</td>
<td>909618.72</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>16698.00</td>
</tr>
<tr>
<td>Accrued Taxes</td>
<td>14827.82</td>
</tr>
<tr>
<td>Total Current Liab.</td>
<td>31525.82</td>
</tr>
<tr>
<td>Debt Financing</td>
<td>25000.00</td>
</tr>
<tr>
<td>Equity</td>
<td>800000.00</td>
</tr>
<tr>
<td>Retained Earnings</td>
<td>53092.90</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>909618.72</td>
</tr>
</tbody>
</table>
SERIES 80 USERS' LIBRARY

PROGRAM DESCRIPTION III

Operating Limits and Warnings Enter all percentages as a decimal less than 1.

Reference(s)

Variables:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>Base period sales total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2</td>
<td>Base period net fixed assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B4</td>
<td>Base period long-term debt remaining</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B5</td>
<td>Base period total owners' equity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B6</td>
<td>Base period accumulated retained earnings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S2</td>
<td>Federal corporate tax rate on profit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S3</td>
<td>Promised period dividends</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R1</td>
<td>Amount of cash the user wishes to hold after base period</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>Accounts receivable turnover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R3</td>
<td>Inventory turnover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R6</td>
<td>Accounts Payable turnover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L(1,1-4)</td>
<td>Estimated percentage of growth in sales for next 4 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L(2,1-4)</td>
<td>Cost of goods sold as an estimated percentage of sales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L(3,1-4)</td>
<td>G, S &amp; A expenses as an estimated percentage of sales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L(4,1-4)</td>
<td>Estimated amount of fixed assets purchases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L(5,1-4)</td>
<td>Estimated amount of fixed assets retired</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L(6,1-4)</td>
<td>Planned payments per quarter on debt</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1 LOAD "INCOME" and press RUN.

2 Enter the input data as requested.
   Be sure to enter percentages as decimals less than 1.

3 Income statement and Balance sheet will be printed.
10 CLEAR
20 OPTION BASE 1
30 DIM L(6,4)
40 DISP "WHAT IS THE BASE PERIOD'S TOTAL SALES"; INPUT B1
50 DISP @ DISP "WHAT ARE THE NET FIXED ASSETS FOR THE BASE PERIOD"; @ INPUT B2
60 DISP @ DISP "WHAT IS THE REMAINING LONG TERM DEBT FOR THE BASE PERIOD"; @ INPUT B4
70 DISP @ DISP "WHAT IS THE TOTAL OWNER'S EQUITY FOR THE BASE PERIOD"; @ INPUT B5
80 DISP @ DISP "WHAT ARE THE RETAINED EARNINGS FOR THE BASE PERIOD"; @ INPUT B6
90 DISP @ DISP "WHAT IS THE FEDERAL CORPORATE TAX RATE"; @ INPUT S2
100 IF S2<1 THEN 120
110 GOSUB 1490 @ GOTO 90
120 DISP @ DISP "WHAT IS THE QUARTERLY PROJECTED AMOUNT OF DIVIDENDS"; @ INPUT S3
130 DISP @ DISP "WHAT AMOUNT OF CASH WOULD YOU LIKE TO RETAIN FOR EACH QUARTER" @ INPUT R1
140 DISP @ DISP "WHAT IS THE NORMAL ACCOUNTS/RECEIVABLE TURNOVER"; @ INPUT R2
150 IF R2>1 THEN 170
160 GOSUB 1500 @ GOTO 140
170 DISP @ DISP "WHAT IS THE NORMAL INVENTORY TURNOVER"; @ INPUT R3
180 IF R3>1 THEN 200
190 GOSUB 1500 @ GOTO 170
200 DISP @ DISP "WHAT PERCENTAGE OF SALES ARE THE ACCOUNTS/PAYABLE (A/P TURNOVER)"; @ INPUT R6
210 IF R6<1 THEN 230
220 GOSUB 1490 @ GOTO 200
230 R8=0
240 CLEAR
250 DISP "ENTER FOUR VALUES FOR EACH QUESTION. EACH VALUE APPLIES TO THE RESPECTIVE QUARTER."
260 DISP @ DISP "ENTER THE ESTIMATED PERCENTAGE GROWTH IN SALES";
270 INPUT L(1,1),L(1,2),L(1,3),L(1,4)
280 IF L(1,1)<1 THEN 300
290 GOSUB 1490 @ GOTO 260
300 DISP @ DISP "ENTER THE COST OF GOODS SOLD AS ESTIMATED PERCENTAGE OF SALES";
310 INPUT L(2,1),L(2,2),L(2,3),L(2,4)
320 IF L(2,1)<1 THEN 340
330 GOSUB 1490 @ GOTO 300
340 DISP @ DISP "ENTER THE GENERAL SELLING AND ADMINISTRATIVE EXPENSE AS A PER-
350 CENTAGE OF SALES"; @ INPUT L(3,1),L(3,2),L(3,3),L(3,4)
360 IF L(3,1)<1 THEN 380
370 GOSUB 1490 @ GOTO 350
380 DISP @ DISP "ENTER THE ESTIMATED AMOUNT OF FIXED ASSET PURCHASES FOR EACH QUARTER"
390 INPUT L(4,1),L(4,2),L(4,3),L(4,4)
400 DISP @ DISP "ENTER THE ESTIMATED AMOUNT OF FIXED ASSET RETIREMENTS FOR EACH QUARTER"
410 INPUT L(5,1),L(5,2),L(5,3),L(5,4)
420 DISP @ DISP "ENTER THE PLANNED DEBT PAYMENTS FOR EACH QUARTER"
430 INPUT L(6,1),L(6,2),L(6,3),L(6,4)
440 CLEAR @ DISP @ DISP @ DISP @ DISP @ DISP @ DISP "PRINT OPTIONS:
450 DISP @ DISP " 1) BALANCE SHEET ONLY"
460 DISP @ DISP " 2) INCOME STATEMENT ONLY"
470 DISP @ DISP " 3) BOTH STATEMENTS"
480 DISP @ DISP " SELECT PRINT OPTION"; @ INPUT K6
490 CLEAR
500 !
510 !
520 B7=B4 @ B8=B5 @ R8=1
530 FOR X=1 TO 4
540 A(X)=S3 @ A9=B1*L(1,X)
550 B1=B1+A9 @ B(X)=B1
560 C(X)=B(X)*L(2,X)
570 X(X)=B(X)*L(3,X)
580 K(X)=B(X)-(C(X)+X(X))
590 D(X)=K(X)*S2
600 U(X)=K(X)-D(X)
610 E(X)=K(X)-D(X)-S3
620 G(X)=B(X)/R2
630 H(X)=B(X)/R3
640 B2=B2+(L(4,X)-L(5,X))
650 N(X)=B2
660 D(X)=R1+N(X)+G(X)+H(X)
670 I(X)=B(X)*R6
680 J(X)=I(X)+D(X)
690 B4=B4-L(6,X)
LISTING

Listing

700 B6=B6+E(X)
710 S(X)=J(X)+B4+B5+B6
720 T(X)=D(X)-S(X)
730 IF T(X)>0 THEN 760
740 Z(X)=R1-T(X)
750 GOTO 840
760 D1=R8*(B5+B6)
770 Z(X)=R1
780 D2=D1-(B4+T(X))
790 IF D2<0 THEN 820
800 B4=B4+T(X)
810 GOTO 840
820 B5=B5-D2
830 B4=B4+(T(X)+D2)
840 P(X)=B4
850 M(X)=B5
860 R(X)=B6
870 F(X)=G(X)+H(X)+Z(X)
880 S(X)=J(X)+P(X)+M(X)+R(X)
890 D(X)=N(X)+G(X)+H(X)+Z(X)
900 NEXT X
910 Y(1)=P(1)-B7
920 W(1)=M(1)-R8
930 FOR X=2 TO 4
940 Y(X)=P(X)-P(X-1)
950 W(X)=M(X)-M(X-1)
960 NEXT X
970 !
980 !
990 IF K6=1 THEN 1180
1000 PRINT "*** INCOME STATEMENT ***"
1010 PRINT "-----------------------------"
1020 PRINT @ PRINT
1030 FOR X=1 TO 4
1040 PRINT " ";X
1050 PRINT "-----------------------------"
1060 IMAGE 20A,2X,7D,DD
1070 PRINT USING 1060 ; "SALES", B(X)
1080 PRINT USING 1060 ; "COST OF GOODS SOLD", C(X)
1090 PRINT USING 1060 ; "GS AND A EXPENSES", X(X)
1100 PRINT USING 1060 ; "PROFIT BEFORE TAX", K(X)
1110 PRINT
1120 PRINT USING 1060 ; "FED. INCOME TAX", D(X)
1130 PRINT USING 1060 ; "PROFIT AFTER TAX", U(X)
1140 PRINT USING 1060 ; "ANNUAL DIVIDENDS", A(X) @ PRINT @ P @ R @ NEXT X
1150 PRINT
1160 PRINT "***************************************************************************************
***************************************************************************************"
1170 PRINT
1180 IF K6=2 THEN 1480
1190 PRINT @ PRINT
1200 PRINT " *** BALANCE SHEET ***"
1210 PRINT " " ------------------
1220 PRINT @ PRINT
1230 FOR X=1 TO 4
1240 PRINT " ;X QUARTER NO.
1250 PRINT " " ------------------"
1260 PRINT
1270 PRINT USING 1060 ; "CASH",Z(X)
1280 PRINT USING 1060 ; "ACCOUNTS RECEIVABLE",U(X)
1290 PRINT USING 1060 ; "INVENTORY",H(X)
1300 PRINT USING 1060 ; "TOTAL CURRENT ASSETS",F(X)
1310 PRINT
1320 PRINT USING 1060 ; "NET FIXED ASSETS",N(X)
1330 PRINT
1340 PRINT USING 1060 ; "TOTAL ASSETS",O(X)
1350 PRINT
1360 PRINT USING 1060 ; "ACCOUNTS PAYABLE",I(X)
1370 PRINT USING 1060 ; "ACCURRED TAXES",D(X)
1380 PRINT USING 1060 ; "TOTAL CURRENT LIAB.",J(X)
1390 PRINT
1400 PRINT USING 1060 ; "DEBT FINANCING",P(X)
1410 PRINT USING 1060 ; "EQUITY",M(X)
1420 PRINT USING 1060 ; "RETIEM DE EARNINGS",R(X)
1430 PRINT
1440 PRINT USING 1060 ; "TOTAL LIABILITIES",S(X)
1450 PRINT @ PRINT
1460 NEXT X
1470 PRINT "********************
***********
1480 END
1490 BEEP @ DISP @ DISP "Enter decimal < 1" @ RETURN
1500 BEEP @ DISP @ DISP "Enter decimal > 1" @ RETURN
SERIES 80 USERS' LIBRARY

PROGRAM DESCRIPTION I

(Please Type)

Program Title  Sales Commission Report

File Name  S A L E S

Contributor's Name

Company (if applicable)

Address

City

State/Country

Zip Code/Mail Code

Machine Size:  16K ☒  32K ☐

Peripherals Required:  none

ROMs Required:  none

Number of Bytes:  1,653

Program Description:  SALES will print a monthly planning table for a sales-
person, with their base salary, incentive dollars, and prospective billing totals.

User accepts and uses this program material AT HIS/HER OWN RISK, in reliance solely upon his/her 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.
SERIES 80 USERS' LIBRARY

PROGRAM DESCRIPTION II

Sample Problem (Sketch if Desired)

Print a monthly planning table for a salesperson with the following input data:

Base annual salary : 5000
Base commission percentage: .20
Base monthly quota : 10
Expected # new accts/mo : 1
Expected initial revenue : 100
Expected rate of growth : .10
Beginning mo. of analysis : 1

SOLUTION:

LOAD "SALES"
RUN

Enter input data as requested.

BASE SALARY = 5000
MONTHLY QUOTA = 10
INITIAL REVENUE = 100
AVERAGE GROWTH = 10 % / MONTH

---------------------------------

MONTH: 1
BASE : 416.67
INCENTIVE : 18.00
TOTAL : 434.67
MONTHLY BILLING : 100.00
TOTAL BILLING : 100.00

---------------------------------

MONTH: 2
BASE : 416.67
INCENTIVE : 40.00
TOTAL : 456.67
MONTHLY BILLING : 210.00
TOTAL BILLING : 310.00

---------------------------------

MONTH: 3
BASE : 416.67
INCENTIVE : 64.20
TOTAL : 480.87
MONTHLY BILLING : 331.00
TOTAL BILLING : 641.00

---------------------------------
SERIES 80 USERS' LIBRARY

PROGRAM DESCRIPTION II

MONTH: 4
BASE : 416.67
INCENTIVE : 90.82
TOTAL : 507.49
MONTHLY BILLING : 464.10
TOTAL BILLING : 1105.10

MONTH: 5
BASE : 416.67
INCENTIVE : 120.10
TOTAL : 536.77
MONTHLY BILLING : 610.51
TOTAL BILLING : 1715.61

MONTH: 6
BASE : 416.67
INCENTIVE : 152.31
TOTAL : 568.98
MONTHLY BILLING : 771.56
TOTAL BILLING : 2487.17

MONTH: 7
BASE : 416.67
INCENTIVE : 187.74
TOTAL : 604.41
MONTHLY BILLING : 948.72
TOTAL BILLING : 3435.89

MONTH: 8
BASE : 416.67
INCENTIVE : 226.72
TOTAL : 643.38
MONTHLY BILLING : 1143.59
TOTAL BILLING : 4579.48

MONTH: 9
BASE : 416.67
INCENTIVE : 269.59
TOTAL : 686.26
MONTHLY BILLING : 1357.95
TOTAL BILLING : 5937.42

MONTH: 10
BASE : 416.67
INCENTIVE : 316.75
TOTAL : 733.42
MONTHLY BILLING : 1593.74
TOTAL BILLING : 7531.17

MONTH: 11
BASE : 416.67
INCENTIVE : 368.62
TOTAL : 785.29
MONTHLY BILLING : 1853.12
TOTAL BILLING : 9384.28

MONTH: 12
BASE : 416.67
INCENTIVE : 425.69
TOTAL : 842.35
MONTHLY BILLING : 2138.43
TOTAL BILLING : 11522.71

YEARLY TOTALS:
PAYROLL:
BASE : 5000.00
INCENTIVE : 2280.54
TOTAL : 7280.54
MONTHLY REVENUE AT END OF CALENDAR YEAR : 2138.43
TOTAL BILLINGS : 11522.71
TOTAL PAYROLL AS A PERCENTAGE OF SALES : 63.18
Operating Limits and Warnings

Reference(s)

Variables:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Base salary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>Base commission percentage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q</td>
<td>Base monthly quota</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>Expected number of new accounts per month</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Expected initial revenue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>Expected rate of growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W1</td>
<td>Beginning month of analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q$</td>
<td>Print option</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1</td>
<td>Monthly base salary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I1</td>
<td>Incentive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T1</td>
<td>Total $</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A4</td>
<td>Monthly billing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A9</td>
<td>Total billing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T9</td>
<td>Total earnings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I3</td>
<td>Total incentive $</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEP</td>
<td>INSTRUCTIONS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>LOAD &quot;SALES&quot; and press RUN.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Enter input data as requested.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Planning table will be printed out on an annual or a monthly basis, as requested.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10 CLEAR
20 DIM Q$[32]
30 A4=0 @ A9=0 @ T4=0 @ T9=0 @ I3=0
40 DISP "ENTER BASE ANNUAL SALARY";
50 INPUT B
60 DISP @ DISP "ENTER COMMISSION
\%";
70 INPUT R
80 DISP @ DISP "ENTER MONTHLY QUOTA";
90 INPUT Q
100 B1=B/12
110 IF R>1 THEN R=R/100
120 DISP @ DISP "ENTER EXPECTED NUMBER OF NEW ACCOUNTS PER MONTH";
130 INPUT N
140 DISP @ DISP "ENTER EXPECTED INITIAL REVENUE AND RATE OF GROWTH";
150 INPUT X,P
160 IF P>1 THEN P=P/100
170 DISP @ DISP "ENTER THE BEGINNING MONTH OF THE ANALYSIS (1-12)";
180 INPUT W1
190 DISP @ DISP "DO YOU WANT AN ANNUAL [A] OR MONTHLY [M] PRINTOUT";
200 INPUT Q$
210 PRINT "BASE SALARY = ",B
220 PRINT "MONTHLY QUOTA = ",Q
230 PRINT "INITIAL REVENUE = ",X
240 PRINT "AVERAGE GROWTH = ",P*100;"\% / MONTH"
250 PRINT @ PRINT
260 PRINT "----------------------" @ PRINT
270 IMAGE 3X.16A,"","6D.DD
280 FOR Z=W1 TO 12
290 A4=N*X+A4*(1+P)
300 I1=(A4-Q)*R
310 IF I1<0 THEN I1=0
320 I3=I3+I1
330 T1=B1+I1
340 T9=T9+T1
350 A9=A9+A4
360 IF Q$="A" THEN 440
370 PRINT "MONTH: ",Z
380 PRINT USING 270; "BASE",B1
390 PRINT USING 270; "INCENTIVE ",I1
400 PRINT USING 270; "TOTAL",T1
410 PRINT USING 270; "MONTHLY BILLING",A4
420 PRINT USING 270; "TOTAL BILLING",A9
430 PRINT @ PRINT "----------------------" @ PRINT
440 NEXT Z
450 PRINT @ PRINT
460 PRINT "YEARLY TOTALS:"
470 PRINT " PAYROLL:"
480 PRINT USING 270 ; " BASE", B
490 PRINT USING 270 ; " INCENTIVE",I3
500 PRINT USING 270 ; " TOTAL", T9
510 PRINT
520 PRINT " MONTHLY REVENUE AT END OF"
530 PRINT USING 270 ; "CALENDAR YEAR", A4
540 PRINT
550 PRINT USING 270 ; "TOTAL BILLINGS", A9
560 PRINT
570 PRINT " TOTAL PAYROLL AS A PERCENTAGE"
580 PRINT USING 270 ; "OF SALES", T9/A9*100
590 END

Print annual report
PROGRAM DESCRIPTION I

Program Title: Financial Ratios

File Name: FINRAT

Contributor's Name

Company (if applicable)

Address

City

State/Country

Zip Code/Mail Code

Machine Size: 16K ☐ 32K ☐

Peripherals Required: none

ROMs Required: none

Number of Bytes: 1,840

Program Description: This program uses income statement and balance sheet data to compute various financial ratios.
Sample Problem (Sketch if Desired)

Compute ratios using the following data:

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net receivables</td>
<td>53985080</td>
<td>Common stock</td>
<td>40569128</td>
</tr>
<tr>
<td>Net inventories</td>
<td>141576993</td>
<td>Capital &amp; earned surplus</td>
<td>120721744</td>
</tr>
<tr>
<td>Net inventories prev yr</td>
<td>109814927</td>
<td>Net sales</td>
<td>344740452</td>
</tr>
<tr>
<td>Current assets</td>
<td>225925178</td>
<td>Cost of goods sold</td>
<td>229779697</td>
</tr>
<tr>
<td>Total assets</td>
<td>323223797</td>
<td>S, G &amp; A expenses</td>
<td>73472649</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>107781631</td>
<td>Net profit</td>
<td>13584388</td>
</tr>
<tr>
<td>Preferred stock</td>
<td>0</td>
<td>Dividends of preferred stock</td>
<td>0</td>
</tr>
</tbody>
</table>

SOLUTION:

LOAD "FINRAT"
RUN

Enter input data as requested.

CURRENT RATIO: 2.09621451104
ACID TEST RATIO: .78261272963
RECEIVABLES TURNOVER: 6.38584792072 TIMES
AVERAGE INVENTORY TURNOVER: 1.82807589801 TIMES
LT DEBT/TOTAL CAPITALIZATION: .2513507241
TOTAL DEBT TO EQUITY: 1.00398043264
GROSS PROFIT MARGIN: 33.346870105%
SELLING, GENERAL AND ADMIN. EXPENSES TO SALES: 21.3125833962%
NET PROFIT MARGIN: 3.94036085166%
RATE OF RETURN ON COMMON STOCK EQUITY: 8.42214906162%
TURNOVER RATIO: 1.06658003836 TIMES
EARNING POWER: 4.20271022833%
Operating Limits and Warnings

Reference(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(1)</td>
<td>Net receivables</td>
</tr>
<tr>
<td>D(2)</td>
<td>Net inventories</td>
</tr>
<tr>
<td>D(3)</td>
<td>Net inventories from previous year end</td>
</tr>
<tr>
<td>D(4)</td>
<td>Current assets</td>
</tr>
<tr>
<td>D(5)</td>
<td>Total assets</td>
</tr>
<tr>
<td>D(6)</td>
<td>Current liabilities</td>
</tr>
<tr>
<td>D(7)</td>
<td>Preferred stock</td>
</tr>
<tr>
<td>D(8)</td>
<td>Common stock</td>
</tr>
<tr>
<td>D(9)</td>
<td>Capital and earned surplus</td>
</tr>
<tr>
<td>D(10)</td>
<td>Net sales</td>
</tr>
<tr>
<td>D(11)</td>
<td>Cost of goods sold</td>
</tr>
<tr>
<td>D(12)</td>
<td>Selling, general and administrative expenses</td>
</tr>
<tr>
<td>D(13)</td>
<td>Net profit</td>
</tr>
<tr>
<td>D(14)</td>
<td>Dividends on preferred stock</td>
</tr>
</tbody>
</table>
SERIES 80 USERS' LIBRARY
USER INSTRUCTIONS

<table>
<thead>
<tr>
<th>STEP</th>
<th>INSTRUCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LOAD &quot;FINRAT&quot; and press RUN.</td>
</tr>
<tr>
<td>2</td>
<td>Enter input data as requested.</td>
</tr>
<tr>
<td>3</td>
<td>Financial ratios will be printed.</td>
</tr>
</tbody>
</table>
10 CLEAR
20 SHORT D(14)
30 DISP "NET RECEIVABLES"
40 INPUT D(1)
50 DISP @ DISP "NET INVENTORIES"
60 INPUT D(2)
70 DISP @ DISP "NET INVENTORIES FROM PREVIOUS YEAR-END"
80 INPUT D(3)
90 DISP @ DISP "CURRENT ASSETS"
100 INPUT D(4)
110 DISP @ DISP "TOTAL ASSETS"
120 INPUT D(5)
130 DISP @ DISP "CURRENT LIABILITIES"
140 INPUT D(6)
150 DISP @ DISP "PREFERRED STOCK"
160 INPUT D(7)
170 DISP @ DISP "COMMON STOCK"
180 INPUT D(8)
190 DISP @ DISP "CAPITAL AND EARNED SURPLUS"
200 INPUT D(9)
210 DISP @ DISP "NET SALES"
220 INPUT D(10)
230 DISP @ DISP "COST OF GOODS SOLD"
240 INPUT D(11)
250 DISP @ DISP "SELLING, GEN & ADMIN. EXPENSES"
260 INPUT D(12)
270 DISP @ DISP "NET PROFIT"
280 INPUT D(13)
290 DISP @ DISP "DIVIDENDS ON PREFERRED STOCK"
300 INPUT D(14)
310 C=D(4)/D(6)
320 PRINT "CURRENT RATIO: "; C @ PRINT
330 A=C-D(2)/D(6)
340 PRINT "ACID TEST RATIO: "; A @ PRINT
350 R1=D(10)/D(1)
360 PRINT "RECEIVABLES TURNOVER: "; R1 @ PRINT
370 I1=D(11)/((D(2)+D(3))/2)
380 PRINT "AVERAGE INVENTORY TURNOVER: ";
390 PRINT I1;" TIMES" @ PRINT
400 D0=D(5)-D(6)-D(7)-D(8)-D(9)
410 D1=D0/(D(5)-D(6))
420 PRINT "LT DEBT/total capitalization:"
430 PRINT D1 @ PRINT
440 D2=(D0+D(6))/(D(7)+D(8)+D(9))
450 PRINT "TOTAL DEBT TO EQUITY: "; D2 @ PRINT
PROGRAM LISTING

460 M=(D(10)-D(11))/D(10)
470 PRINT "GROSS PROFIT MARGIN: ";M*100;"%" @ PRINT
480 S1=D(12)/D(10)
490 PRINT "SELLING, GENERAL AND ADMIN. EXPENSES TO SALES ";100*S1;"%" @ PRINT
500 M2=D(13)/D(10)
510 PRINT "NET PROFIT MARGIN: ";100*M2;"%" @ PRINT
520 R2=(D(13)-D(14))/(D(8)+D(9))
530 PRINT "RATE OF RETURN ON COMMON STOCK EQUITY: ";100*R2;"%" @ PRINT
540 T=D(10)/D(5)
550 PRINT "TURNOVER RATIO: ";T;" TIMES" @ PRINT
560 E=D(13)/D(5)
570 PRINT "EARNING POWER: ";E*10
0;"%" @ PRINT
580 END
SERIES 80 USERS' LIBRARY

PROGRAM DESCRIPTION I

(Please Type)

Program Title: Lease Income

File Name: LEASI

Contributor's Name

Company (if applicable)

Address

City

State/Country

Zip Code/Mail Code

Machine Size: 16K ☒ 32K ☐

Peripherals Required: none

ROMs Required: none

Number of Bytes: 3,377

Program Description: This program calculates annual lease income from (U) units at sales price (S) leased at lease rate (R) for lease period (L). It also sums the total income by year over (Y) years of lease operation.

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SERIES 80 USERS' LIBRARY

PROGRAM DESCRIPTION II

Sample Problem (Sketch if Desired)
Calculate lease income from the following activity: (5 year lease period)

<table>
<thead>
<tr>
<th>Annual Shipments</th>
<th>Ave. Sales Price (K$)</th>
<th>Ave. Lease Rate</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>32</td>
<td>2.6</td>
<td>1</td>
</tr>
<tr>
<td>22</td>
<td>32</td>
<td>2.6</td>
<td>2</td>
</tr>
<tr>
<td>25</td>
<td>29</td>
<td>2.6</td>
<td>3</td>
</tr>
<tr>
<td>25</td>
<td>29</td>
<td>2.55</td>
<td>4</td>
</tr>
<tr>
<td>22</td>
<td>29</td>
<td>2.55</td>
<td>5</td>
</tr>
<tr>
<td>14</td>
<td>27.5</td>
<td>2.55</td>
<td>6</td>
</tr>
<tr>
<td>27.5</td>
<td>27</td>
<td>2.5</td>
<td>7</td>
</tr>
<tr>
<td>27</td>
<td>26.5</td>
<td>2.5</td>
<td>8</td>
</tr>
<tr>
<td>26.5</td>
<td>26</td>
<td>2.5</td>
<td>9</td>
</tr>
<tr>
<td>26</td>
<td>26.5</td>
<td>2.5</td>
<td>10</td>
</tr>
<tr>
<td>26</td>
<td>26</td>
<td>2.5</td>
<td>11</td>
</tr>
</tbody>
</table>

SOLUTION:

LOAD "LEASIN"
RUN

The program will prompt you to input data.

ANNUAL INCOME FOR PRODUCT

<table>
<thead>
<tr>
<th>YEAR</th>
<th>INCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>169.73</td>
</tr>
<tr>
<td>2</td>
<td>389.38</td>
</tr>
<tr>
<td>3</td>
<td>579.07</td>
</tr>
<tr>
<td>4</td>
<td>789.79</td>
</tr>
<tr>
<td>5</td>
<td>989.01</td>
</tr>
<tr>
<td>6</td>
<td>988.82</td>
</tr>
<tr>
<td>7</td>
<td>799.50</td>
</tr>
<tr>
<td>8</td>
<td>494.10</td>
</tr>
<tr>
<td>9</td>
<td>286.20</td>
</tr>
<tr>
<td>10</td>
<td>111.30</td>
</tr>
<tr>
<td>11</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Operating Limits and Warnings  Lease period in years + number of years manufacturing product must be less than 50.

Reference(s)

Variables:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>Lease period (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td># years to manufacture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>U(*)</td>
<td>annual shipments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S(*)</td>
<td>annual sales price</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R(*)</td>
<td>annual lease rate (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S(*)</td>
<td>annual income</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SERIES 80 USERS' LIBRARY
USER INSTRUCTIONS

STEP INSTRUCTIONS

1 LOAD "LEASIN" and press RUN.

2 Enter the number of years in the lease period.

3 Enter the number of years product will be distributed.

4 For each year the product is distributed, enter the number of products to be distributed.

5 For each year the products is in the marketplace or on lease, enter the average sales price in thousands of dollars.

6 For each year the product is in the marketplace or on lease, enter the average lease rate in % of sales per month.

7 For each year the product is in the marketplace or on lease, the annual income will be printed.
10 CLEAR
20 DIM A(50), R(50), S(50), U(50), X(50)
30 DISP "ON AN ANNUAL BASIS OF SHIPMENTS OVER 'Y' YEARS, THIS PROGRAM WILL CALCULATE LEASE";
40 DISP "INCOME BASED ON VARIABLE LENGTH PRODUCT LIFE (LEASE PERIOD)"
50 DISP @ DISP @ DISP
60 DISP "ENTER LEASE PERIOD (YEARS)";
70 INPUT L
80 DISP @ DISP "ENTER NUMBER OF YEARS PRODUCT IS DISTRIBUTED ";
90 INPUT Y
100 CLEAR
110 DISP @ DISP "NOW ENTER THE ANNUAL SHIPMENTS FOR EACH YEAR:"
120 FOR I=1 TO Y
130 DISP "YEAR "; I; @ INPUT U(I)
140 NEXT I
150 CLEAR
160 DISP "NOW ENTER AVG SALES PRICE FOR EACH YEAR SYSTEMS ARE INSTALLED"
170 DISP "AND FOR ALL YEARS SYSTEM REMAINS ON LEASE:" @ DISP
180 FOR I=1 TO Y+L
190 DISP "YEAR "; I; @ INPUT S(I)
200 NEXT I
210 CLEAR
220 DISP "NOW ENTER AVG LEASE RATE IN % OF SALES PRICE PER MONTH WITHOUT"
230 DISP "SERVICE FOR EACH YEAR SYSTEMS ARE INSTALLED AND REMAIN LEASED:"
240 DISP
250 FOR I=1 TO Y+L
260 DISP "YEAR "; I; @ INPUT R(I)
270 NEXT I
280 CLEAR
290 FOR I=1 TO Y+L
300 B=I
310 IF I<Y THEN 330
320 B=Y
330 L1=I-L+1
340 IF L1>0 THEN 360
350 L1=1
360 X(I)=0
370 FOR C=L1 TO B
380 X(I)=U(C)+X(I)
390 NEXT C
400 A(I)=R(I)*S(I)*12/100*X(I)
410 NEXT I
420 PRINT " ANNUAL INCOME FOR PRODUCT"
430 PRINT
440 PRINT " YEAR INCOM E"
450 IMAGE 6X,DD,4X,7D,DD
460 FOR I=1 TO Y+L
470 PRINT USING 450 ; I,A(I)
480 NEXT I
490 PRINT @ END

Print annual income
Program Title: Make-Buy Decision Analysis

File Name: MKBURY

Contributor's Name

Company (if applicable)

Address

City

State/Country

Zip Code/Mail Code

Machine Size: 16K ☑ 32K ☐

Peripherals Required: none

ROMs Required: none

Number of Bytes: 4,483

Program Description: This program calculates the present value of the cost saving incurred by making a product as opposed to buying it. It also prints a cash flow summary for each method for each year involved.

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Sample Problem (Sketch if Desired)

Is is cheaper to make or to buy #2 pencils given the following information:

- Company name: Hewlett Packard
- Cost to buy: .05
- Cost to make: .04
- Cost of equipment: 10000
- Life of equipment: 5 years
- Salvage value: 0
- Annual fixed costs: 2500
- Corporate tax rate: 25%
- Local tax rate: 55
- Cost of capital: 12%
- Yearly demand: 10000

SOLUTION:

LOAD "MKBUY"
RUN

Enter the input data as requested.

Results:

THE PRESENT VALUE OF THE COST TO MAKE IS 15208.24

THE PRESENT VALUE OF THE COST TO BUY IS 1206.95

HEWLETT PACKARD SHOULD BUY #2 PENCIL AT A SAVINGS OF $14001.2919547

*** THE FLOWS ***

YEAR 1

TO BUY:

<table>
<thead>
<tr>
<th>EXPENSE</th>
<th>CASH FLOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

TO MAKE:

<table>
<thead>
<tr>
<th>EXPENSE</th>
<th>CASH FLOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>-466.62</td>
</tr>
</tbody>
</table>

*** NET 466.62

-----------------------
YEAR 2

TO BUY:
   EXPENSE  500.00
   CASH FLOW  375.00

TO MAKE:
   EXPENSE  6600.00
   CASH FLOW  1616.67

*** NET  -1241.67

-------------------------------------------------

YEAR 3

TO BUY:
   EXPENSE  500.00
   CASH FLOW  375.00

TO MAKE:
   EXPENSE  5786.67
   CASH FLOW  1673.33

*** NET  -1298.33

-------------------------------------------------

YEAR 4

TO BUY:
   EXPENSE  500.00
   CASH FLOW  375.00

TO MAKE:
   EXPENSE  5010.00
   CASH FLOW  1757.50

*** NET  -1382.50

-------------------------------------------------

YEAR 5

TO BUY:
   EXPENSE  500.00
   CASH FLOW  375.00

TO MAKE:
   EXPENSE  4270.00
   CASH FLOW  1869.17

*** NET  -1494.17

-------------------------------------------------

YEAR 6

TO BUY:
   EXPENSE  500.00
   CASH FLOW  375.00

TO MAKE:
   EXPENSE  3566.67
   CASH FLOW  2008.33

*** NET  -1633.33

-------------------------------------------------
Operating Limits and Warnings

Reference(s)

Variables:

<table>
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<tr>
<th>Name</th>
<th>Description</th>
<th>Length</th>
<th>Comments</th>
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<tbody>
<tr>
<td>D$</td>
<td>Company name</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>I$</td>
<td>Product name</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>I1</td>
<td>Cost to buy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I2</td>
<td>Cost to make</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I3</td>
<td>Initial investment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I4</td>
<td>Investment life</td>
<td></td>
<td></td>
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<tr>
<td>I5</td>
<td>Salvage value</td>
<td></td>
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</tr>
<tr>
<td>I7</td>
<td>Annual fixed costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I8</td>
<td>Corporate tax rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I9</td>
<td>Local tax on investment ($/1000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J1</td>
<td>Cost of capital (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J2</td>
<td>Yearly demand for product</td>
<td></td>
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<tr>
<td>A(*)</td>
<td>Expenses (buy)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B(*)</td>
<td>Cash flows (buy)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C(*)</td>
<td>Expenses (make)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D(*)</td>
<td>Cash flows (make)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SERIES 80 USERS' LIBRARY

USER INSTRUCTIONS

1. LOAD "MKB0U" and press RUN.
2. Enter the input data as prompted.
3. Computer will print results.
4. Here you have the option of changing one or more input values and recomputing the result. There are 12 options 1 through 10 permit you to re-enter an input parameter. Option 11 re-computes the result and prints.

FOR EXAMPLE: To re-do the example with a different initial capital investment, type 3 and press ENDLINE. Enter the new initial capital investment figure. When the list of options is displayed again, enter 11 and press ENDLINE. The new results will be printed.
10 CLEAR
20 DIM I*$[25], D*$[25], A(25), B(25), C(25), D(25),
30 C2=0 @ C8=0 @ A1=0 @ Y1=0
40 A(1)=0 @ B(1)=0 @ C(1)=0 @ D(1)=0
50 DISP "WHAT IS THE NAME OF YOUR COMPANY?";
60 INPUT D$
70 DISP @ DISP "ENTER THE NAME OF THE COMPONENT UNDER CONSIDERATION";
80 INPUT I$
90 FOR X=1 TO 10 @ CLEAR
100 ON X GOSUB 9100, 9200, 9300, 99000, 9900, 99000, 99000, 99000
110 NEXT X
120 CLEAR @ D(1)=D1 @ C7=D1
130 D(I4+1)=-15*(1-I8)
140 FOR A=2 TO I4
150 C(A)=0 @ D(A)=0
160 NEXT A
170 FOR A=2 TO I4+1
180 C6=(I+1)@A
190 R(A)=I1*J2
200 B(A)=A(A)*(1-I8)
210 C5=B(A)/C6
220 C8=C8+C5
230 S6=I3-I5
240 C1=S6*(I4+2-A)/S4
250 C2=C2+C1
260 C3=(I3-C2)*I9
270 C4=I2*J2+I7+C3
280 C(A)=C4+C1+C(A)
290 D(A)=C4*(1-I8)-C1*I8+D(A)
300 C5=D(A)/C6
310 C7=C7+C5
320 NEXT A
325 C7=C7+I3
330 PRINT "THE PRESENT VALUE OF THE COST TO MAKE IS "; INT(C7*100)/100
340 PRINT
350 PRINT "THE PRESENT VALUE OF THE COST TO BUY IS "; INT(C8*100)/100
360 PRINT
370 C9=ABS(C8-C7)
380 ON SGN(C8-C7)+2 GOTO 390, 450, 410
390 C$="BUY"
400 GOTO 420
410 C$="MAKE"
420 PRINT D$; " SHOULD "; C$
430 PRINT I$; " AT A SAVINGS OF $ "; C9
440 PRINT
450 IF A1=1 THEN 650
460 PRINT
470 PRINT " *** THE Flows * ***"
480 PRINT
490 FOR A=1 TO 14+1
500 PRINT "YEAR ";A & PRINT
510 PRINT " TO BUY:"
520 IMAGE 7X,10A,XX.5D.DD
530 PRINT USING 520 ; "EXPENSE", A(A)
540 PRINT USING 520 ; "CASH FLOW ",B(A)
550 PRINT
560 PRINT " TO MAKE:";
570 PRINT USING 520 ; "EXPENSE", C(A)
580 PRINT USING 520 ; "CASH FLOW ",D(A)
590 PRINT
600 PRINT USING 520 ; "** NET ",B(A)-D(A)
610 PRINT
620 PRINT " ----------------------
630 PRINT
640 NEXT A
650 CLEAR
660 DISP " *** ADJUSTMENT OPTI
670 DISP " " OPTIONS"
680 DISP " 0) END PROGRAM"
690 DISP " 1) COST TO BUY"
700 DISP " 2) COST TO MANUFACTU
710 DISP " 3) INITIAL INVESTM
720 DISP " 4) INVESTMENT LIFE
730 DISP " 5) INVESTMENT SALVAGE VALUE"
740 DISP " 6) ANNUAL FIXED COSTS"
750 DISP " 7) CORPORATE TAX RATE (\%)
760 DISP " 8) LOCAL TAX RATE ($/1000)"
770 DISP " 9) CAPITAL COST (\%)
780 DISP " 10) YEARLY DEMAND ESTIMATE"
790 DISP " 11) RE-COMPUTE COSTS"
800 DISP " --> ENTER OPTION";
810 INPUT @ & CLEAR
815 IF 0<@ OR 0>11 THEN 650
820 ON 0+1 GOSUB 840,9100,9200,9
300,9400,9500,9600,9700,9800
,9900,9950,120
821 IF 0#5 THEN 824
822 I5=A3
823 C(I4+1)=-I5
824 IF 0#10 THEN 830
825 C2=0 @ C8=0
830 GOTO 650
840 END
9100 DISP "WHAT IS THE COST TO BUY ONE"
9110 DISP I$;" FOR YOUR PLANT"
9120 INPUT I1
9130 RETURN
9200 DISP "ENTER THE COST TO MANUFACTURE"
9210 DISP "A ";I$
9220 DISP "IN YOUR PLANT INCLUDING DIRECT MATERIALS AND LABOR EXCLUDING OVERHEAD"
9230 INPUT I2
9240 RETURN
9300 DISP "WHAT IS THE INITIAL INVESTMENT (COST OF THE EXTRA MACHINERY)"
9310 INPUT I3
9320 RETURN
9400 DISP "WHAT IS THE LIFE OF THAT INVESTMENT IN YEARS"
9405 INPUT I4
9406 IF I4>=4 THEN 9409
9407 S3=0
9408 GOTO 9413
9409 IF I4>=8 THEN 9412
9410 S3=2/3*0.07*I3
9411 GOTO 9413
9412 S3=0.07*I3
9413 D1=I1-S3
9420 RETURN
9500 DISP "WHAT IS THE SALVAGE VALUE OF THIS INVESTMENT"
9510 INPUT I5
9520 C(I4+1)=-I5
9530 S4=0 @ FOR S5=1 TO I4 @ S4=S4+S5 @ NEXT S5
9540 RETURN
9600 DISP "WHAT ARE THE ANNUAL FIXED COSTS (SUPERVISION AND MAINTENANCE) INVOLVED"
9610 INPUT I7
9620 RETURN
9700 DISP "WHAT IS YOUR CORPORATE TAX RATE IN PERCENT"
9710 INPUT I8
9720 IF I8>1 THEN I8=I8/100
9730 RETURN
9800 DISP "WHAT IS THE LOCAL TAX RATE ON THE EXTRA INVESTMENT ($/1000)"
9810 INPUT I9
9820 I9=I9/100
9830 RETURN
9900 DISP "WHAT IS YOUR COST OF CAPITAL IN PERCENT"
9910 INPUT J1
9920 IF J1<1 THEN J1=J1/100
9930 RETURN
9950 DISP "WHAT IS YOUR ESTIMATE
OF THE YEARLY DEMAND FOR
R ";I$;
9960 INPUT J2
9970 RETURN
SERIES 80 USERS' LIBRARY
PROGRAM DESCRIPTION I

(Please Type)

Program Title: Loan Amortization

File Name: L O A N

Contributor's Name

Company (if applicable)

Address

City

State/Country

Zip Code/Mail Code

Machine Size: 16K ☒ 32K ☐

Peripherals Required: none

ROMs Required: none

Number of Bytes: 1,613

Program Description: This program amortizes a loan using arbitrary monthly payments entered by the user. Monthly reports are generated indicating payments to interest and principal. Yearly reports are printed showing accumulated payments to interest and principal and the remaining balance. Final payment is computed when balance falls below user-set maximum monthly payment.
**SERIES 80 USERS' LIBRARY**

**PROGRAM DESCRIPTION II**

**Sample Problem (Sketch if Desired)**

Starting month : September (9)  
Maximum Pmt./Mo: 75  
Principal : 450  
Interest rate : 10%  
Payments : 75, 50, 60, 50, 70, 75, 55

**SOLUTION:**

LOAD "LOAN"
RUN

Enter input parameters as prompted.  
PRINCIPAL = 450  
INT. RATE = 10%  
MAX. PMT. = 75

MONTH 10  
PAYMENT = 75  
INTEREST = 3.75  
CUM INT = 3.75  
PRINCIPAL= 71.25  
CUM PRINC= 71.25  
BALANCE = 378.75

MONTH 11  
PAYMENT = 50  
INTEREST = 3.16  
CUM INT = 6.91  
PRINCIPAL= 46.84  
CUM PRINC= 118.09  
BALANCE = 331.91

MONTH 12  
PAYMENT = 60  
INTEREST = 2.77  
CUM INT = 9.67  
PRINCIPAL= 57.23  
CUM PRINC= 175.33  
BALANCE = 274.67

---

YEAR 1  
TOTAL PAY MADE = 185  
YEAR CUM INT = 9.67  
YEAR PRINC PAY = 175.33  
BALANCE = 274.67
SERIES 80 USERS' LIBRARY

PROGRAM DESCRIPTION II

MONTH 1
PAYMENT = 50
INTEREST = 2.29
CUM INT = 11.96
PRINCIPAL = 47.71
CUM PRINC = 223.04
BALANCE = 226.96

MONTH 2
PAYMENT = 70
INTEREST = 1.89
CUM INT = 13.85
PRINCIPAL = 68.11
CUM PRINC = 291.15
BALANCE = 158.85

MONTH 3
PAYMENT = 75
INTEREST = 1.32
CUM INT = 15.18
PRINCIPAL = 73.68
CUM PRINC = 364.82
BALANCE = 85.18

MONTH 4
PAYMENT = 55
INTEREST = .71
CUM INT = 15.89
PRINCIPAL = 54.29
CUM PRINC = 419.11
BALANCE = 30.89

MONTH 5
PAYMENT = 31.14
INTEREST = .26
CUM INT = 16.14
PRINCIPAL = 30.89
CUM PRINC = 450
BALANCE = 0

YEAR 2
TOTAL PAY MADE = 281.14
YEAR CUM INT = 6.47
YEAR PRINC PAY = 274.67
BALANCE = 0

8 PAYMENTS WERE MADE
Operating Limits and Warnings

Reference(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Length</th>
<th>Comments</th>
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<td>N1</td>
<td>Starting month</td>
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<tr>
<td>M</td>
<td>Maximum allowable payment</td>
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<td></td>
</tr>
<tr>
<td>P</td>
<td>Principal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>Interest rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Payment</td>
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<td></td>
</tr>
<tr>
<td>I</td>
<td>Interest</td>
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<td>I1</td>
<td>Cumulative interest</td>
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<td></td>
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<tr>
<td>P2</td>
<td>Principal</td>
<td></td>
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<tr>
<td>P3</td>
<td>Cumulative principal</td>
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<tr>
<td>X6</td>
<td>Total payments</td>
<td></td>
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<tr>
<td>I6</td>
<td>Yearly cumulative interest</td>
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<td></td>
</tr>
<tr>
<td>P6</td>
<td>Yearly cumulative principal</td>
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</tr>
<tr>
<td>Y</td>
<td>Year number</td>
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<tr>
<td>STEP</td>
<td>INSTRUCTIONS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>LOAD &quot;LOAN&quot; and press RUN.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Enter principal, interest rate, maximum monthly payment as prompted.</td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td>Enter each monthly payment as prompted.</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Monthly and yearly reports will be printed as payments are entered.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SERIES 80 USERS' LIBRARY

PROGRAM LISTING

Listing

10 CLEAR
20 DEF FNA(X) = INT((X*1000+5)/10)/100
30 DISP "ENTER STARTING MONTH (FEB=2)";
40 INPUT N1
50 DISP @ DISP "ENTER MAXIMUM ALLOWABLE PAYMENT PER MONTH";
60 INPUT M
70 Y=1 @ Z=1 @ I1=0 @ N=0 @ P3=0
80 DISP @ DISP "ENTER PRINCIPAL ";
90 INPUT P
100 DISP @ DISP "ENTER INTEREST RATE";
110 INPUT R
120 PRINT "PRINCIPAL =",P
130 PRINT "INT. RATE =",R,"%"
140 PRINT "MAX. PMT. =",M
150 PRINT @ PRINT
160 R=R/100
170 P6=0 @ I6=0 @ X6=0
180 DISP @ DISP "ENTER PAYMENT";
190 INPUT X
200 IF X>=0 AND X<=M THEN 220
210 BEEP @ DISP "INVALID PAYMENT MAX = ",M @ DISP @ GOTO 18
220 X6=X6+X
230 I=P*R/12
240 I6=I6+I
250 I1=I1+I
260 N1=N1+1
270 N=N+1
280 IF NOT Z OR X THEN 310
290 P2=0
300 GOTO 360
310 P2=X-I
320 IF P2>=0 THEN 360
330 P=P+ABS(P2)
340 P2=0
350 GOTO 290
360 P3=P3+P2
370 P6=P6+P2
380 IF X THEN 410
390 P=P+I
400 GOTO 420
410 P=P-P2
420 PRINT "MONTH ";N1
430 PRINT "PAYMENT = ";FNA(X)
440 PRINT "INTEREST = ";FNA(I)
450 PRINT "CUM INT = ";FNA(I1)
460 PRINT "PRINCIPAL= ";FNA(P2)
470 PRINT "CUM PRINC= ";FNA(P3)

Comments

Data entry
Housekeeping
Enter payment
Total payments
Total interest
Print report
480 PRINT "BALANCE = "; FNAC(P)
490 IF Z=0 THEN 550
500 IF N1=12 THEN 550
510 IF P>M THEN 180
520 X=P+P*R/12
530 Z=0
540 GOTO 220
550 PRINT @ PRINT "------------------------
------------------------"
560 PRINT
570 PRINT "YEAR ";Y
580 PRINT "TOTAL PAY MADE = "; FNAC(X6)
590 PRINT "YEAR CUM INT = "; FNAC(I6)
600 PRINT "YEAR PRINC PAY = "; FNAC(P6)
610 PRINT "BALANCE = "; FNAC(P)
620 PRINT @ PRINT "------------------------
------------------------"
630 PRINT
640 Y=Y+1 @ N1=0
650 IF Z=0 THEN 670
660 GOTO 170
670 PRINT N;" PAYMENTS WERE MADE 
680 END
Program Title: Mortgage Analysis

File Name: M O R G A G

Contributor's Name

Company (if applicable)

Address

City

State/Country

Zip Code/Mail Code

Machine Size: 16K ☐ 32K ☐

Peripherals Required: None

ROMs Required: None

Number of Bytes: 3,357

Program Description: MORGAG will find the missing parameter of the following four, given the remaining three: interest rate, life (years), amount borrowed, and monthly payment. The program will then print a monthly or yearly summary indicating the amount of interest, amount of payment and outstanding balance for each period.
Sample Problem (Sketch if Desired)
Select unknown variable: Pmt (Key #4)
Nominal annual rate : 10.5
Mortgage life (yrs,mos): 6,0
Borrowed amount : 10000
Settlement date (mo,yr): 1,1980
Table length (years) : 6
Print annual summary : 1

SOLUTION:
LOAD "MORGAG".
RUN
Enter input parameters as prompted.

MORTGAGE TERMS
NOMINAL ANNUAL RATE = 10.5 %
MORTGAGE LIFE = 6 YRS 0 MONTHS
AMOUNT BORROWED = 10000
MONTHLY PAYMENT = 187.79

-----------------------------
MORTGAGE TABLE

<table>
<thead>
<tr>
<th>Year</th>
<th>Interest</th>
<th>Principal</th>
<th>Ending Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>912.93</td>
<td>1152.76</td>
<td>8847.24</td>
</tr>
<tr>
<td>1981</td>
<td>863.32</td>
<td>1390.16</td>
<td>7457.09</td>
</tr>
<tr>
<td>1982</td>
<td>710.09</td>
<td>1543.39</td>
<td>5913.70</td>
</tr>
<tr>
<td>1983</td>
<td>540.01</td>
<td>1713.47</td>
<td>4200.23</td>
</tr>
<tr>
<td>1984</td>
<td>351.20</td>
<td>1902.28</td>
<td>2297.96</td>
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<tr>
<td>1985</td>
<td>141.56</td>
<td>2111.92</td>
<td>186.04</td>
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Operating Limits and Warnings

Reference(s)

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<th>Description</th>
<th>Length</th>
<th>Comments</th>
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<td>R</td>
<td>Interest rate</td>
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<tr>
<td>Y</td>
<td>Years of mortgage life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>Months of mortgage life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Amount borrowed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>Monthly payment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T1</td>
<td>Month of settlement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T2</td>
<td>Year of settlement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T3</td>
<td>Table length (years)</td>
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<tr>
<td>Z1</td>
<td>Summary selection</td>
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</tr>
<tr>
<td>I1, S1</td>
<td>Monthly, Yearly interest PAID</td>
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<td></td>
</tr>
<tr>
<td>P1, S2</td>
<td>Monthly, Yearly principal PAID</td>
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</tr>
<tr>
<td>A1</td>
<td>Monthly starting balance</td>
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</tr>
<tr>
<td>A2</td>
<td>Unpaid principal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T2</td>
<td>Current year for table</td>
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</tr>
<tr>
<td>M2</td>
<td>Current month for table</td>
<td></td>
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</tbody>
</table>
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USER INSTRUCTIONS

STEP INSTRUCTIONS

1 LOAD "MORGAG" and press RUN.
2 Select Special Function key corresponding to unknown variable.
3 Enter remaining three variables as prompted.
4 Enter settlement date, table length, and summary selections as prompted.
5 Tables will be printed.
10 DIM M$[36]
20 CLEAR
25 DEF FNA(X) = INT((X*1000+5)/10)/100
30 M$="JANFEBMARAPRMAJUNJULYAUG
SEPNOVDEC"
40 ON KEY# 1,"RATE" GOTO 110
50 ON KEY# 2,"LIFE" GOTO 120
60 ON KEY# 3,"AMOUNT" GOTO 130
70 ON KEY# 4,"PMT" GOTO 140
80 KEY LABEL @ DISP
90 DISP "SELECT UNKNOWN VARIABLI
E:"

100 GOTO 100
110 Z=1 @ GOTO 150
120 Z=2 @ GOTO 150
130 Z=3 @ GOTO 150
140 Z=4
150 CLEAR
160 !
170 !
180 IF Z=1 THEN 240
190 DISP "ENTER NOMINAL ANNUAL R
ATE (%)"
200 INPUT R
210 R=R/100
220 DISP
230 IF Z=2 THEN 280
240 DISP "ENTER MORTGAGE LIFE (Y
RS/MONTHS)"
250 INPUT Y,M
260 DISP
270 IF Z=3 THEN 320
280 DISP "ENTER AMOUNT TO BE BOR
ROWED"
290 INPUT A
300 DISP
310 IF Z=4 THEN 350
320 DISP "ENTER MONTHLY PAYMENT"
330 INPUT P
340 DISP
350 DISP "ENTER SETTLEMENT DATE
(MO,YEAR)"
360 INPUT T1,T2
370 DISP
380 DISP "ENTER TABLE LENGTH (YE
ARS)"
390 INPUT T3
400 DISP @ DISP "PRINT ANNUAL (1
) OR MONTHLY (2) SUMMARY"
410 INPUT Z1
420 CLEAR
430 IF Z=2 THEN 460
440 N=12*Y+M
450 IF Z=1 THEN 620
460 R=R/12
470 IF Z=3 THEN 570
480 IF Z=4 THEN 600
490 IF A*R/P<1 THEN 520

Set up option selection
Wait for special function key
Data entry
Error trap
500 BEEP @ DISP "THE FIRST MONTH'S PAYMENT WILL NOT COVER I'T'S INTEREST"
510 STOP
520 N=-LOG(1-A*R/P)/LOG(1+R)
530 N=INT(N)+1
540 Y=INT(N/12)
550 M=N-12*Y
560 GOTO 740
570 A=P*(1-(1+R)^N)/R
580 A=INT(A*100+5)/10
590 GOTO 740
600 P=A*R*(1+(1+R)^N)/(1+(1+R)^N-1)
610 GOTO 740
620 R=(P*N/A-1)/12
630 R1=R
640 IF R>0 THEN 690
650 BEEP @ DISP "RATE IS NEGATIVE OR ZERO"
660 STOP
670 R=R-2*R1
680 R=R+R1
690 C=P*(1/(R/(1+(1+R)^N-1)+R))
700 IF ABS(C-A)<.01 THEN 740
710 R1=R1/2
720 IF C-A<0 THEN 670
730 GOTO 680
740 IF 12*P>R*A*12+1 THEN 800
750 BEEP
760 DISP "YOUR FIRST YEARS PAYMENTS ARE ";12*P
770 DISP @ DISP "THE FIRST YEAR'S INTEREST IS ";R*A*12
780 DISP @ DISP "THEREFORE, THE LIFE OF THE MORTGAGE IS UNDEFINED"
790 STOP
800 !
810 PRINT "MORTGAGE TERMS"
820 PRINT
830 PRINT "HOMINAL ANNUAL RATE = ";FNA(R*1200);"%"
840 PRINT
850 PRINT "MORTGAGE LIFE =";Y;"YEARS";M;"MONTHS"
860 PRINT
870 PRINT "AMOUNT BORROWED =";A
880 PRINT
890 PRINT "MONTHLY PAYMENT =";FM
900 PRINT
910 IF Z#2 THEN 930
920 PRINT "MORTGAGE LIFE HAS BEEN ROUNDED UP TO THE NEAREST MONTH" @ PRINT
930 PRINT "-------------------------
940 PRINT "-------------------------
950 PRINT "MORTGAGE TABLE"
**SERIES 80 USERS' LIBRARY**

**PROGRAM LISTING**

<table>
<thead>
<tr>
<th>Listing</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>960 PRINT</td>
<td></td>
</tr>
<tr>
<td>970 Z2=0 @ S1=0 @ S2=0</td>
<td></td>
</tr>
<tr>
<td>980 IF T1=12 THEN 1000</td>
<td></td>
</tr>
<tr>
<td>990 M2=T1 @ GOTO 1020</td>
<td></td>
</tr>
<tr>
<td>1000 T2=T2+1</td>
<td></td>
</tr>
<tr>
<td>1010 M2=0</td>
<td></td>
</tr>
<tr>
<td>1020 M3= M2+1</td>
<td></td>
</tr>
<tr>
<td>1030 IF Z1 = 2 THEN PRINT &quot; FOR THE CALENDER YEAR &quot;; T2 @ PRINT ENDING&quot;</td>
<td></td>
</tr>
<tr>
<td>1040 IF Z1 = 1 THEN PRINT &quot;</td>
<td></td>
</tr>
<tr>
<td>1050 IF Z1 = 2 THEN PRINT &quot;</td>
<td></td>
</tr>
<tr>
<td>1060 PRINT &quot; INTEREST PRINCIPAL BALANCE&quot;</td>
<td></td>
</tr>
<tr>
<td>1070 FOR M1=M3 TO 12*T3</td>
<td></td>
</tr>
<tr>
<td>1080 I1=FNA(A*I)</td>
<td></td>
</tr>
<tr>
<td>1090 IF P&lt;A+I1 THEN P1=P-I1 ELSE P1=A</td>
<td></td>
</tr>
<tr>
<td>1100 A1=A @ A=A1-P1</td>
<td></td>
</tr>
<tr>
<td>1110 S1=S1+I1 @ S2=S2+P1</td>
<td></td>
</tr>
<tr>
<td>1120 M2=M2+1</td>
<td></td>
</tr>
<tr>
<td>1130 IF Z1 = 1 THEN 1320</td>
<td></td>
</tr>
<tr>
<td>1140 IMAGE 4A,50.DD,2&lt;XX,5D.DD&gt;</td>
<td></td>
</tr>
<tr>
<td>1150 PRINT USING 1140 ; M<em>E3</em>M2-2,3*M2J,I1,P1,A1</td>
<td></td>
</tr>
<tr>
<td>1160 IF M2 = 12 THEN 1190</td>
<td></td>
</tr>
<tr>
<td>1170 IF A&gt;0 THEN 1400</td>
<td></td>
</tr>
<tr>
<td>1180 Z2=1</td>
<td></td>
</tr>
<tr>
<td>1190 PRINT</td>
<td></td>
</tr>
<tr>
<td>1200 PRINT &quot;PRINCIPAL REPAID = &quot;;</td>
<td></td>
</tr>
<tr>
<td>FNA(S2)</td>
<td></td>
</tr>
<tr>
<td>1210 PRINT &quot;INTEREST PAID = &quot;;</td>
<td></td>
</tr>
<tr>
<td>FNA(S1)</td>
<td></td>
</tr>
<tr>
<td>1220 PRINT &quot;UNPAID PRINCIPAL = &quot;;</td>
<td></td>
</tr>
<tr>
<td>FNA(A)</td>
<td></td>
</tr>
<tr>
<td>1230 PRINT</td>
<td></td>
</tr>
<tr>
<td>1240 IF Z2 = 1 THEN 1420</td>
<td></td>
</tr>
<tr>
<td>1250 T2=T2+1</td>
<td></td>
</tr>
<tr>
<td>1260 PRINT &quot;-------------------------</td>
<td></td>
</tr>
<tr>
<td>1270 PRINT</td>
<td></td>
</tr>
<tr>
<td>1280 IF M1=12*T3 THEN 1410</td>
<td></td>
</tr>
<tr>
<td>1290 PRINT &quot; FOR THE CALENDAR YEAR &quot;; T2</td>
<td></td>
</tr>
<tr>
<td>1300 PRINT</td>
<td></td>
</tr>
<tr>
<td>1310 GOTO 1390</td>
<td></td>
</tr>
<tr>
<td>1320 IF M2=12 THEN 1350</td>
<td></td>
</tr>
<tr>
<td>1330 IF A&gt;0 THEN 1400</td>
<td></td>
</tr>
<tr>
<td>1340 Z2=1</td>
<td></td>
</tr>
<tr>
<td>1350 PRINT USING 1140 ; VAL$(T2) , S1,S2,A</td>
<td></td>
</tr>
<tr>
<td>1360 T2=T2+1</td>
<td></td>
</tr>
<tr>
<td>1370 IF M1=12*T3 THEN 1410</td>
<td></td>
</tr>
<tr>
<td>1380 IF Z2=1 THEN 1410</td>
<td></td>
</tr>
<tr>
<td>1390 S1=0 @ S2=0 @ M2=0</td>
<td></td>
</tr>
<tr>
<td>1400 NEXT M1</td>
<td></td>
</tr>
<tr>
<td>1410 PRINT</td>
<td></td>
</tr>
<tr>
<td>1420 END</td>
<td></td>
</tr>
</tbody>
</table>
Program Title: Cost of Equity Capital

File Name: EQUITY

Contributor's Name:

Company (if applicable):

Address:

City:

State/Country:

Zip Code/Mail Code:

Machine Size: 16K ☒ 32K ☐

Peripherals Required: none

ROMs Required: none

Number of Bytes: 3040

Program Description: This program will compute the cost of equity capital by computing dividends and the share price for future periods. It will then find the discount rate by equating the present stream value to the current share price.
Sample Problem (Sketch if Desired)

Compute cost of equity capital with the following conditions:

Current Price/Share = $100  Dividends/Share = $10

<table>
<thead>
<tr>
<th>Segment #</th>
<th>Growth Rate</th>
<th>Last Effective Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.02</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>.03</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>.04</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>.05</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>.06</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>.07</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>.08</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>.10</td>
<td>25</td>
</tr>
</tbody>
</table>

SOLUTION:

LOAD "EQUITY"

RUN

Enter input parameters as prompted

SHARE PRICE: 100
DIVIDEND: 10
INITIAL GROWTH RATE: 2%

COST OF EQUITY CAPITAL = 15.74 %
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PROGRAM DESCRIPTION III

Operating Limits and Warnings  Enter growth rate as decimal less than one.

Reference(s)  Computations are based on the Gordon model.

Variables:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Current price/share</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D(*)</td>
<td>Dividends/share</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td># of growth segments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>Cost of equity capital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td># of iterations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SERIES 80 USERS' LIBRARY
USER INSTRUCTIONS

STEP          INSTRUCTIONS

1  LOAD "EQUITY" and press RUN.

2  Enter current price per share and dividends per share.

3  Enter the number of growth segments.

4  For each growth segment, enter the growth rate as a decimal less
   than one, and the last effective period for the segment.

5  Results will be printed.

6  You now have four options:
   a) NEW RUN: go to Step 2 (enter new problem).
   b) GROWTH : go to Step 3 (enter new growth information).
   c) PRICE   : go to Step 2 (enter new prices), then go to Step 5.
   d) END     : stops program.

Select option by pressing appropriate special function key.
10 DIM D(100),L(20),B(20),G(20)
20 Q=0
30 CLEAR
40 DISP "ENTER THE CURRENT PRICE/SHARE";
50 INPUT P
60 DISP @ DISP "ENTER CURRENT DIVIDENDS/SHARE";
70 INPUT D(1)
80 IF Q=2 THEN 180
90 DISP @ DISP "ENTER THE NUMBER OF GROWTH SEGMENTS";
100 INPUT N
110 CLEAR @ DISP "FOR EACH GROWTH SEGMENT, ENTER THE GROWTH RATE IN DECIMAL AND"
120 DISP "THE LAST EFFECTIVE PERIOD FOR EACH SEGMENT" @ DISP
130 FOR I=1 TO N
140 DISP "SEGMENT ";I;
150 INPUT G(I),L(I)
160 NEXT I
170 CLEAR
180 R=0
190 B(1)=1
200 IF N=1 THEN R=100*(D(1)/P+G(1)) @ GOTO 290
210 FOR I=1 TO N-1
220 FOR J=B(I) TO L(I)
230 D(J+1)=D(J)*(1+G(I))
240 NEXT J
250 B(I+1)=L(I)+1
260 R=R+G(I)
270 NEXT I
280 GOSUB 450
290 PRINT "SHARE PRICE:";TAB(20)
300 PRINT "DIVIDEND:";TAB(20);D(1)
310 PRINT "INITIAL GROWTH RATE:" ;INT(G(1)*100);"%"
320 PRINT "PRODUCT OF EQUITY CAPITAL=";INT(R*100)/100;"%"
330 PRINT "-----------------------------
            ----------------
340 PRINT
350 ON KEY# 1,"NEW RUN" GOTO 410
360 ON KEY# 2,"GROWTH" GOTO 420
370 ON KEY# 3,"PRICE" GOTO 430
380 ON KEY# 4,"END" GOTO 440
390 CLEAR @ KEY LABEL @ DISP "SELECT OPTION"
400 GOTO 400
410 CLEAR @ GOTO 20
420 Q=1 @ CLEAR @ GOTO 90
430 Q=2 @ CLEAR @ GOTO 40
440 CLEAR @ END
450 R=(R+G(N))/N+D(1)/P
460  M=0
470  R=R-.55
480  D1=1
490  FOR I=1 TO 13
500  R=R+D1
510  M=M+1
520  D1=D1/2
530  R=R-D1
540  F=1
550  IF M>100 THEN 680
560  IF R=-1 THEN 650
570  Z=-P
580  FOR J=1 TO L(N-1)
590  F=F/(1+R)
600  Z=Z+D(J)*F @ NEXT J
610  IF R<G(N) THEN 500
620  Z=Z+D(L(N-1))*F/(R-G(N))
630  IF Z<0 THEN 530
640  NEXT I
650  R=100*R
660  R=INT(100*R+.5)/100
670  RETURN
680  PRINT
690  PRINT "TOO MANY ITERATIONS."
700  PRINT "LAST COST WAS ",R*100
    "PERCENT"
710  PRINT "WITH VALUE ";Z
720  GOTO 350
Program Title: Depreciation Method Comparison

File Name: DEPCOM

Contributor's Name

Company (if applicable)

Address

City

State/Country

Zip Code/Mail Code

Machine Size: 16K ☐ 32K ☐

Peripherals Required: none

ROMs Required: none

Number of Bytes: 7,764

Program Description: This program computes and prints the monthly depreciation of a given investment by four methods: straight line, double declining balance, sum of the years digits, and 150% declining balance.
Sample Problem (Sketch if Desired)
Amount of investment : 35000
Salvage value : 15000
Depreciable life : 5 years
Investment made in : 07,1969
Discount rate : .15
Automatic switchover : 1
Yearly summary desired: Y

SOLUTION:
LOAD "DEPCOM"
RUN

Enter input parameters as prompted

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>STRAIGHT LINE</td>
<td>1666.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOUBLE DECLINING</td>
<td>3333.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUM OF YEARS DIGITS</td>
<td>2777.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150% DECLINING</td>
<td>2500.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CUMULATIVE DEPRECIATION:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>STRAIGHT LINE</td>
<td>1666.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOUBLE DECLINING</td>
<td>3333.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUM OF YEARS DIGITS</td>
<td>2777.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150% DECLINING</td>
<td>2500.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

UNDEPRECIATED BALANCE:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>STRAIGHT LINE</td>
<td>18333.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOUBLE DECLINING</td>
<td>16666.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUM OF YEARS DIGITS</td>
<td>17222.22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150% DECLINING</td>
<td>17500.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SERIES 80 USERS' LIBRARY
PROGRAM DESCRIPTION II

TOTAL 1970
STRAIGHT LINE = 4000.00
DOUBLE DECLINING = 6666.67
SUM OF YEARS DIGITS = 6111.11
150% DECLINING = 5250.00

CUMULATIVE DEPRECIATION:
STRAIGHT LINE = 5666.67
DOUBLE DECLINING = 10000.00
SUM OF YEARS DIGITS = 8888.89
150% DECLINING = 7750.00

UNDEPRECIATED BALANCE:
STRAIGHT LINE = 14333.33
DOUBLE DECLINING = 10000.00
SUM OF YEARS DIGITS = 11111.11
150% DECLINING = 12250.00

---------------
TOTAL 1971
STRAIGHT LINE = 4000.00
DOUBLE DECLINING = 3800.00
SUM OF YEARS DIGITS = 4777.78
150% DECLINING = 3675.00

CUMULATIVE DEPRECIATION:
STRAIGHT LINE = 9666.67
DOUBLE DECLINING = 13800.00
SUM OF YEARS DIGITS = 13666.67
150% DECLINING = 11425.00

UNDEPRECIATED BALANCE:
STRAIGHT LINE = 10333.33
DOUBLE DECLINING = 6200.00
SUM OF YEARS DIGITS = 6333.33
150% DECLINING = 8575.00

---------------
TOTAL 1972
STRAIGHT LINE = 4000.00
DOUBLE DECLINING = 2400.00
SUM OF YEARS DIGITS = 3444.44
150% DECLINING = 2572.50

CUMULATIVE DEPRECIATION:
STRAIGHT LINE = 13666.67
DOUBLE DECLINING = 16200.00
SUM OF YEARS DIGITS = 17111.11
150% DECLINING = 13997.50

UNDEPRECIATED BALANCE:
STRAIGHT LINE = 6333.33
DOUBLE DECLINING = 3800.00
SUM OF YEARS DIGITS = 2888.89
150% DECLINING = 6002.50

---------------
TOTAL 1973
STRAIGHT LINE = 4000.00
DOUBLE DECLINING = 2400.00
SUM OF YEARS DIGITS = 2111.11
150% DECLINING = 1800.75

CUMULATIVE DEPRECIATION:
STRAIGHT LINE = 17666.67
DOUBLE DECLINING = 18600.00
SUM OF YEARS DIGITS = 19222.22
150% DECLINING = 15798.25

UNDEPRECIATED BALANCE:
STRAIGHT LINE = 2333.33
DOUBLE DECLINING = 1400.00
SUM OF YEARS DIGITS = 777.78
150% DECLINING = 4201.75

---------------
TOTAL 1974
STRAIGHT LINE = 2333.33
DOUBLE DECLINING = 1400.00
SUM OF YEARS DIGITS = 777.78
150% DECLINING = 840.35

CUMULATIVE DEPRECIATION:
STRAIGHT LINE = 20000.00
DOUBLE DECLINING = 20000.00
SUM OF YEARS DIGITS = 20000.00
150% DECLINING = 16638.60

UNDEPRECIATED BALANCE:
STRAIGHT LINE = 0.00
DOUBLE DECLINING = 0.00
SUM OF YEARS DIGITS = 0.00
150% DECLINING = 3361.40

---------------
THE PRESENT VALUE OF THE DEPRECIATION AT THE START OF 1969 AT .15 IS AS FOLLOWS:

STRAIGHT LINE = 13488.62
DOUBLE DECLINING = 14729.48
SUM OF YEARS DIGITS = 14647.51
150% DECLINING = 12219.19
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Program Description III

Operating Limits and Warnings
Depreciable life must be greater than two years and less than 51 years.

Reference(s)

Variables:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1</td>
<td>Amount of investment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S1</td>
<td>Salvage value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L1</td>
<td>Depreciation life (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>Month of investment date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z1</td>
<td>Year of investment date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>Discount rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>Switchover option</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W(I)</td>
<td>Straightline depreciation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X(I)</td>
<td>Double declining depreciation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y(I)</td>
<td>Sum of years digits depreciation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z(I)</td>
<td>150% declining depreciation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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USER INSTRUCTIONS

<table>
<thead>
<tr>
<th>STEP</th>
<th>INSTRUCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LOAD &quot;DEPCOM&quot; and press RUN.</td>
</tr>
<tr>
<td>2</td>
<td>Enter input parameters as prompted.</td>
</tr>
<tr>
<td>3</td>
<td>Enter switchover option:</td>
</tr>
<tr>
<td></td>
<td>0) Prevent switchover.</td>
</tr>
<tr>
<td></td>
<td>1) Automatic switchover from double declining balance method to</td>
</tr>
<tr>
<td></td>
<td>straightline depreciation when annual straightline depreciation</td>
</tr>
<tr>
<td></td>
<td>becomes greater than the double declining balance value.</td>
</tr>
<tr>
<td></td>
<td>Year #) Specifies in which year switchover should take place.</td>
</tr>
<tr>
<td>4</td>
<td>If annual summary desired only enter 'Y', else enter 'N' to get</td>
</tr>
<tr>
<td></td>
<td>monthly and annual summary.</td>
</tr>
<tr>
<td>5</td>
<td>Results will be printed.</td>
</tr>
</tbody>
</table>
10 CLEAR
20 DIM A(50), B(50), C(50), D(50)
30 DIM H(50), I(50), J(50), K(50)
40 DIM W(12), X(12), Y(12), Z(12)
50 DISP "ENTER THE AMOUNT OF INVESTMENT";
60 INPUT L1
70 DISP @ DISP "ENTER THE SALVAGE VALUE";
80 INPUT S1
90 DISP @ DISP "WHAT IS THE DEPRECIABLE LIFE";
100 INPUT L1
110 IF L1>2 AND L1<51 THEN 150
120 BEEP @ DISP "Life too";
130 IF L1<3 THEN DISP "short" @ GOTO 90
140 DISP "long" @ GOTO 90
150 DISP @ DISP "ENTER INVESTMENT DATE <MM,YY>";
160 INPUT A1, Z1
170 DISP @ DISP "ENTER THE DISCOUNT RATE <N<1> FOR COMPUTING THE PRESENT VALUE"
180 DISP "OF THE ANNUAL DEPRECIATION";
190 INPUT R @ CLEAR
200 DISP @ DISP "SWITCHOVER OPTIONS:";
210 DISP @ DISP "0) NO SWITCHOVER"
220 DISP "1) AUTOMATIC"
230 DISP "Year) SPECIFIC TIME"
240 DISP @ DISP "ENTER OPTION:";
250 INPUT Y
260 CLEAR @ DISP "DO YOU WISH A YEARLY SUMMARY ONLY";
270 INPUT Z @ CLEAR
280 K=0 @ P=0 @ S=0
290 Q1=0 @ Q2=0 @ Q3=0 @ Q4=0
300 V1=0 @ V2=0 @ V3=0 @ V4=0
310 ! STRAIGHTLINE
320 N=S1
330 FOR I=1 TO L1
340 A(I)=(I(I+1))/L1
350 H(I)=A(I)/12
360 NEXT I
370 ! DOUBLE DECLINING BALANCE
380 N=S1
390 FOR I=1 TO L1
400 B(I)=2*((I1-N)/L1)
410 I(I)=B(I)/12
420 M=N
430 N=N+B(I)
440 GOTO 470
450 NEXT I
460 GOTO 700
470 IF Y<1 THEN 450
480 IF Y>1 THEN 600
490 IF I=1 THEN 450
500 IF P=1 THEN 570
510 IF B(I)>A(I) THEN 450
520 G=L1+1-I
530 P=1
540 B(I)=(I1-M)/G
550 I(I)=B(I)/12
560 GOTO 450
570 B(I)=B(I-1)
580 I(I)=B(I)/12
590 GOTO 450
600 G=Y+1-Z1
610 IF I<G THEN 450
620 IF P=1 THEN 670
630 P=1
640 B(I)=(I1-M)/(L1+1-G)
650 I(I)=B(I)/12
660 GOTO 450
670 B(I)=B(I-1)
680 I(I)=B(I)/12
690 GOTO 450
700 ! SUM OF YEARS DIGITS
710 N=S1
720 FOR I=1 TO L1
730 C(I)=(I1-N)*(L1+1-I)*(2/(L1*(L1+1))
740 J(I)=C(I)/12
750 NEXT I
760 ! 150% DECLINING BALANCE
770 N=S1
780 FOR I=1 TO L1
790 D(I)=1.5*((I1-N)/L1)
800 K(I)=D(I)/12
810 N=N+D(I)
820 NEXT I
830 I=0
840 K=K+1
850 X=K+(Z1-1)
860 IF K<=L1+1 THEN 1040
870 FOR I=1 TO L1
880 V1=V1+A(I)/(1+R)^I
890 V2=V2+B(I)/(1+R)^I
900 V3=V3+C(I)/(1+R)^I
910 V4=V4+D(I)/(1+R)^I
920 NEXT I
930 PRINT
940 PRINT "THE PRESENT VALUE OF THE"
950 PRINT "DEPRECIATION AT THE S TART OF"
960 PRINT Z1," AT",R," IS AS FOL LOWS:"
970 PRINT
980 PRINT USING 1740 ; V1
990 PRINT USING 1750 ; V2
1000 PRINT USING 1760 ; V3
1010 PRINT USING 1770 ; V4
1020 PRINT
1030 END
1040 I=I+1
 SERIES 80 USERS' LIBRARY

PROGRAM LISTING

Listing

1050 IF I>12 THEN 1310
1060 IF I<=A1 THEN 1160
1070 S=1
1080 IF K<L1+1 THEN 1110
1090 W(I)=0 @ X(I)=0 @ Y(I)=0 @ Z(I)=0
1100 GOTO 1230
1110 W(I)=H(K)
1120 X(I)=I(K)
1130 Y(I)=J(K)
1140 Z(I)=K(K)
1150 GOTO 1230
1160 IF S=0 THEN 1220
1170 W(I)=H(K-1)
1180 X(I)=I(K-1)
1190 Y(I)=J(K-1)
1200 Z(I)=K(K-1)
1210 GOTO 1230
1220 W(I)=0 @ X(I)=0 @ Y(I)=0 @ Z(I)=0
1230 ! PRINTOUT ROUTINE
1240 IF Z$[1,13]="Y" THEN 1040
1250 PRINT VAL$(I);"/";VAL$(X-19)
1260 PRINT USING 1740 ; W(I)
1270 PRINT USING 1750 ; X(I)
1280 PRINT USING 1760 ; Y(I)
1290 PRINT USING 1770 ; Z(I)
1300 PRINT @ GOTO 1040
1310 ! TOTALS ROUTINE
1320 S=1
1330 T1=0 @ T2=0 @ T3=0 @ T4=0
1340 FOR J=1 TO 12
1350 T1=T1+W(J)
1360 T2=T2+X(J)
1370 T3=T3+Y(J)
1380 T4=T4+Z(J)
1390 NEXT J
1400 Q1=Q1+T1
1410 Q2=Q2+T2
1420 Q3=Q3+T3
1430 Q4=Q4+T4
1440 PRINT "TOTAL ";X
1450 PRINT USING 1740 ; T1
1460 PRINT USING 1750 ; T2
1470 PRINT USING 1760 ; T3
1480 PRINT USING 1770 ; T4
1490 PRINT
1500 PRINT "CUMULATIVE DEPRECIATION"
1510 PRINT
1520 PRINT USING 1740 ; Q1
1530 PRINT USING 1750 ; Q2
1540 PRINT USING 1760 ; Q3
1550 PRINT USING 1770 ; Q4
1560 PRINT
1570 B1=11-S1-Q1
1580 IF B1<=1 THEN B1=0
1590 B2=11-S1-Q2
1600 IF B2<=1 THEN B2=0
1610 B3=I1-S1-Q3
1620 IF B3<=1 THEN B3=0
1630 B4=I1-S1-Q4
1640 IF B4<=1 THEN B4=0
1650 PRINT "UNDEPRECIATED BALANC E:

1660 PRINT
1670 PRINT USING 1740 ; B1
1680 PRINT USING 1750 ; B2
1690 PRINT USING 1760 ; B3
1700 PRINT USING 1770 ; B4
1710 PRINT
1720 PRINT "--------------------"
1730 GOTO 830
1740 IMAGE 3X,"STRAIGHT LINE  
    = ".SD.DD
1750 IMAGE 3X,"DOUBLE DECLINING  
    = ".SD.DD
1760 IMAGE 3X,"SUM OF YEARS DIGITS= ".SD.DD
1770 IMAGE 3X,"150% DECLINING  
    = ".SD.DD
1780 END
SERIES 80 USERS' LIBRARY

PROGRAM DESCRIPTION I

(Please Type)

Program Title  Simple Loan Analysis

File Name       L E N D E R

Contributor's Name

Company (if applicable)

Address

City

State/Country

Zip Code/Mail Code

Machine Size:  16K ☑  32K ☐

Peripherals Required:  none

ROMs Required:  none

Number of Bytes:  1,313

Program Description:  LENDER calculates the monthly interest charges and outstanding balance of a loan that must be paid off in one year or less.
SOLUTION:

LOAD "LENDER"
RUN

Enter input data as requested

<table>
<thead>
<tr>
<th>MONTH</th>
<th>INTEREST</th>
<th>PRINCIPAL</th>
<th>BALANCE DUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.06</td>
<td>91.94</td>
<td>258.06</td>
</tr>
<tr>
<td>2</td>
<td>2.26</td>
<td>92.74</td>
<td>165.32</td>
</tr>
<tr>
<td>3</td>
<td>1.45</td>
<td>93.55</td>
<td>71.77</td>
</tr>
<tr>
<td>4</td>
<td>.63</td>
<td>71.77</td>
<td>0</td>
</tr>
</tbody>
</table>

MONTHS TO PAY OFF LOAN: 4
TOTAL INTEREST CHARGES: 7.4
### Operating Limits and Warnings

Term of loan must be one year or less

### Variables:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Amount of loan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>Monthly payment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>Interest rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>Months to pay off loan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>Total interest charges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Monthly interest</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SERIES 80 USERS' LIBRARY
USER INSTRUCTIONS

STEP
1. LOAD "LENDER" and press RUN.
2. Enter amount of loan.
3. Enter the monthly payment.
4. Enter the interest as greater than one (for example: 11.5).
5. Results will be printed.
10 CLEAR
20 DISP "ENTER THE AMOUNT OF THE LOAN";
30 INPUT B
40 DISP @ DISP "ENTER THE MONTHLY PAYMENT";
50 INPUT M
60 DISP @ DISP "ENTER THE INTEREST RATE";
70 INPUT R
80 IF R>1 THEN 110
90 BEEP @ DISP "Enter rate as percent > 1"
100 GOTO 60
110 CLEAR
120 Z=B*R/1200
130 IF (Z+B)/12<M THEN 160
140 BEEP @ DISP "LOAN CANNOT BE PAID OFF IN LESS THAN ONE YEAR. INCREASE YOUR MONTHLY PAYMENT"
150 DISP @ GOTO 20
160 PRINT "AMOUNT OF LOAN: "; B
170 PRINT "MONTHLY PAYMENT: "; M
180 PRINT "INTEREST RATE: "; R;
190 PRINT
200 PRINT "-----------------------
-----------------------" @ PRINT
210 T=0
220 X=0
230 FOR N=1 TO 37
240 I=B*R/1200
250 I=INT(100*I+.5)/100
260 B=B+I-M
270 T=T+1
280 X=X+1
290 PRINT "MONTH: ";TAB(18);X
300 PRINT " INTEREST: ";TAB(18);I
310 PRINT " PRINCIPAL: ";TAB(18);M-I
320 PRINT " BALANCE DUE: ";TAB(18);B
330 PRINT "-----------------------
-----------------------"
340 PRINT
350 IF B<=M THEN 370
360 NEXT N
370 N=N+1
380 F=B
390 I=B*R/1200
400 I=INT(100*I+.5)/100
410 T=T+1
420 X=X+1 @ B=0
430 PRINT "MONTH: ";TAB(18);X
440 PRINT " INTEREST: ";TAB(18);I
450 PRINT " PRINCIPAL: ";TAB(18)

Data entry

Error trap

Print input data

Final payment
SERIES 80 USERS' LIBRARY

PROGRAM LISTING

Listing

460 PRINT " BALANCE DUE:";TAB(18);B
470 PRINT @ PRINT "-----------------------"
480 PRINT
490 PRINT "MONTHS TO PAY OFF LOAN"
500 PRINT @ PRINT "TOTAL INTEREST CHARGES:";T
510 END

Comments

Final report
BUDGETING AND FINANCE I

PROFORMA INCOME STATEMENT AND BALANCE SHEET
SALES COMMISSION REPORT
FINANCIAL RATIOS
LEASE INCOME
MAKE—BUY DECISION ANALYSIS
LOAN AMORTIZATION
MORTGAGE ANALYSIS
COST OF EQUITY CAPITAL
DEPRECIATION METHOD COMPARISON
SIMPLE LOAN ANALYSIS

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