THE YR SOFTWARE PROGRAM: COMPUTING YEARLY PRODUCTION COSTS OF COMMON COMP (U) ARMY CLOSE COMBAT ARMAMENTS CENTER DOVER NJ H T ANDERSON DEC 86 ARCCD-SP-86081
THE YR SOFTWARE PROGRAM:
COMPUTING YEARLY PRODUCTION COSTS OF
COMMON COMPONENTS IN MULTI-ITEM AMMUNITION SYSTEMS

HAROLD T. ANDERSON

DECEMBER 1986

U. S. ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
CLOSE COMBAT ARMAMENT CENTER
DOVER, NEW JERSEY

APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED.
The YR Software Program was developed to reduce response time for providing production cost estimates for multi-item ammunition systems where the items use parts in common. The report has been written to make the program available to those required to make similar estimates.

The language used is the Hewlett-Packard Basic developed for the HP9845T desk calculator.
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INTRODUCTION

The YR Computer Program is developed to improve response time for preparing unit cost estimates for multiyear buys of the 120-mm ammunition used in the M1E1 tank.

Prior to the development of this program, the yearly unit cost of each component common to two or more rounds and subject to a learning curve was calculated separately. In addition, a separate learning curve was used for each vendor. The unit costs, thus obtained, were combined with other cost data to obtain the yearly total and unit cost for each round. Written in the Hewlett-Packard Basic language, the YR program combines the input cost data and prints out yearly cost estimates in one-fifth of the time previously required. The program also escalates the estimates to "then year" and "constant year" dollars.

The program avoids introduction of errors by eliminating the necessity for manual transfer of data from one set of calculations to another. It also provides a printout of input data for review and correction before continuing with the calculations.

Instructions for using the program are given below; a flow chart is contained in appendix A. * INSTRUCTIONS*

Organize data for entry into the program by the use of data sheets similar to the one shown in appendix B. Then:

1. Enter the YR PROGRAM in the computer memory.

2. Press the RUN key to start the program. YR PROGRAM will appear on the CRT.

3. A printout on the CRT will request inputs and list instructions. Requested information is to be typed in and entered by pressing CONT key.

Note: Data items and character lengths should be limited as follows:
- round designation-5, number of rounds-8, components/round-10,
- vendors/component-3, component name-15, number of years-25.

4. Entered information will appear on the CRT.

* This software program has been written in the Basic language used in the Hewlett Packard 9845T desk calculator. Modification may be required for use on machines using a different dialect.
5. After a group of inputs has been entered, a printout on the CRT will ask if the inputs are correct:

- If the inputs are correct, then the answer (yes) is indicated by keying in CONT. The program will then continue.

- If the inputs are not correct, then the answer (no) is indicated by keying in Ø. The program will then go back and rerequest the last group of inputs. When an item of data that was previously entered correctly is rerequested, keying in CONT will reenter it without change. Data is corrected by typing in the correct data when requested and pressing CONT, per step 3, above. The incorrect data will remain on the CRT, but the corrected inputs will also appear on the CRT as they are reentered.

6. When all the data item inputs for a specific round have been entered, these inputs will be printed on paper. (A typical printout is shown in appendix B.) A printout on the CRT will ask if these inputs are correct. The procedure listed in step 5, above, will apply for approval or correction of the printed data.

7. When the data for all rounds have been entered and/or corrected, the required calculated costs will be printed on paper.

SOFTWARE

The software for the program is contained in appendix C.

REFINEMENT

The YR Program is currently being revised to interact with a mass storage so that learning curve first unit costs, fixed costs, and escalation factors can be retrieved for use without manual re-entry, if ammunition quantity changes require recalculation of yearly costs. It is also being translated into GW-Basic for use in WYSE personal computers.

A possible refinement is modification of the program to determine the quantity of a designated round that can be obtained for a set dollar value. The quantities of other rounds using common components must be known for this refinement.

The program as written reserves storage for up to a maximum of eight rounds, each with up to ten components made by three possible vendors. The program can be modified so the reserved storage for these input data items can be expanded and contracted within the storage capability of the computer.
APPENDIX A

FLOW CHART
SUB-PROGRAM FOR DATA INPUT

ENTER NO. OF YEARS CONSIDERED (Sy)

SET ESCALATION TO CONSTANT YR & YEAR = 0
(YrC = 0)

IS ESCALATION TO CONSTANT YR & YC = 0?

ENTER ESCALATION YEAR
(YrC)

IS ESCALATION YEAR = 0?

ENTER ESCALATION FACTOR FOR CONSTANT YR & YC

INITIATE YEAR LOOP FOR T = 1 TO Sy

T > 1

IS THIS 1ST YEAR?

ENTER 1ST YEAR DATE
(YrD)

CRT PRINT YEAR
YEAR OF
YEARS

SET ESCALATION FACTOR, THEN
YR = 0
(ESC 2 = 0)

CONTR.
SH/3

ADD 1 TO PRIOR YR.
DATE
(YrS = YrS + 1)
FROM SH 6

VENDOR DATA CORRECT?
1200
1210
1220

LAST COMPONENT IN LOOP
1240

RETURN TO PROGRAM TO PRINT COPY INPUT DATA

1250
APPENDIX B

DATA SHEET, INPUT DATA
AND TYPICAL PRINTOUT
<table>
<thead>
<tr>
<th>COMPONENT DESIGNATION</th>
<th>COMPONENT DESIGNATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROC. FACTOR Z</td>
<td>PROC. FACTOR Z</td>
</tr>
<tr>
<td>COMMON W/DESIG.</td>
<td>COMMON W/DESIG.</td>
</tr>
<tr>
<td>1 UNIT COST $</td>
<td>1 UNIT COST $</td>
</tr>
<tr>
<td>1st.U. COST $</td>
<td>1st.U. COST $</td>
</tr>
<tr>
<td>1% LEARNING</td>
<td>1% LEARNING</td>
</tr>
<tr>
<td>VENDOR No.</td>
<td>VENDOR No.</td>
</tr>
<tr>
<td>% OF BUY</td>
<td>% OF BUY</td>
</tr>
<tr>
<td>PRIOR QTY.</td>
<td>PRIOR QTY.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>COMPONENT DESIGNATION</td>
<td>COMPONENT DESIGNATION</td>
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<tr>
<td>PROC. FACTOR Z</td>
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<tr>
<td>COMMON W/DESIG.</td>
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<td>1% LEARNING</td>
</tr>
<tr>
<td>VENDOR No.</td>
<td>VENDOR No.</td>
</tr>
<tr>
<td>% OF BUY</td>
<td>% OF BUY</td>
</tr>
<tr>
<td>PRIOR QTY.</td>
<td>PRIOR QTY.</td>
</tr>
<tr>
<td></td>
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<td>COMPONENT DESIGNATION</td>
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<td>1st.U. COST $</td>
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<tr>
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<td>1% LEARNING</td>
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<tr>
<td>VENDOR No.</td>
<td>VENDOR No.</td>
</tr>
<tr>
<td>% OF BUY</td>
<td>% OF BUY</td>
</tr>
<tr>
<td>PRIOR QTY.</td>
<td>PRIOR QTY.</td>
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<td>COMPONENT DESIGNATION</td>
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<tr>
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<tr>
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<td>1% LEARNING</td>
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<tr>
<td>VENDOR No.</td>
<td>VENDOR No.</td>
</tr>
<tr>
<td>% OF BUY</td>
<td>% OF BUY</td>
</tr>
<tr>
<td>PRIOR QTY.</td>
<td>PRIOR QTY.</td>
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</table>

**DATA SHEET**

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<tr>
<th>COMPONENT DESIGNATION</th>
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</thead>
<tbody>
<tr>
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<tr>
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<td>1% LEARNING</td>
<td>1% LEARNING</td>
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<tr>
<td>VENDOR No.</td>
<td>VENDOR No.</td>
</tr>
<tr>
<td>% OF BUY</td>
<td>% OF BUY</td>
</tr>
<tr>
<td>PRIOR QTY.</td>
<td>PRIOR QTY.</td>
</tr>
</tbody>
</table>

**YEAR OF**

ESCALATE TO CONST. Yr. ___ $ BY FACTOR OF ___

ESCALATE TO "THEN" Yr. ___ $ BY FACTOR OF ___

ROUND OF ___

ROUND DESIGNATION ___

BUY QTY. ___ REF. QTY. ___ PURCHASE QTY. ___

PRICE $ ___ QA COST $ ___ ESP Cost $ ___ OR ___

NUMBER OF COMPONENTS ___

**COMPONENT DESIGNATION:**

- PROC. FACTOR Z
- COMMON W/DESIG.
- 1 UNIT COST $
- 1st.U. COST $
- 1% LEARNING
- VENDOR No.
- % OF BUY
- PRIOR QTY.

**COMPONENT DESIGNATION:**

- PROC. FACTOR Z
- COMMON W/DESIG.
- 1 UNIT COST $
- 1st.U. COST $
- 1% LEARNING
- VENDOR No.
- % OF BUY
- PRIOR QTY.

**COMPONENT DESIGNATION:**

- PROC. FACTOR Z
- COMMON W/DESIG.
- 1 UNIT COST $
- 1st.U. COST $
- 1% LEARNING
- VENDOR No.
- % OF BUY
- PRIOR QTY.

**COMPONENT DESIGNATION:**

- PROC. FACTOR Z
- COMMON W/DESIG.
- 1 UNIT COST $
- 1st.U. COST $
- 1% LEARNING
- VENDOR No.
- % OF BUY
- PRIOR QTY.
<table>
<thead>
<tr>
<th>Component</th>
<th>Procurement Fact.</th>
<th>Component Not Shared</th>
<th>Vendor 1 of 3 %</th>
<th>Vendor 2 of 3 %</th>
<th>Vendor 3 of 3 %</th>
<th>Prior Qty by Vendor</th>
<th>Cost ($)</th>
<th>Learning %</th>
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</tr>
<tr>
<td>Component 1 of 9</td>
<td>3 %</td>
<td></td>
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<tr>
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<td>4 %</td>
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<td>VENDOR 1 of 3 %</td>
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<td>VENDOR 2 of 3 %</td>
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<td>5 %</td>
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<td>SHARED DESIG. 1</td>
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<td>Component 5 of 9</td>
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<tr>
<td>VENDOR 3 of 3 %</td>
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</tr>
<tr>
<td>Component 6 of 9</td>
<td>4 %</td>
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<tr>
<td>Component 7 of 9</td>
<td>3 %</td>
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<td></td>
<td></td>
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</tr>
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<td>TRACER</td>
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<tr>
<td>COMPONENT 8 of 9</td>
<td>2 %</td>
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</tr>
</tbody>
</table>

ESIP COST: 4% HARDWARE COST

COMP. UC: $0
1st UC: $251.7
LEARNING: 90 %

Prior Qty by Vendor: 12246.7

Vendor 1 of 3%
Vendor 2 of 3%
Vendor 3 of 3%

Cost: $24295

MPTS

Component 1 of 9

Procurement Fact: 3%
Component Not Shared
Vendor 1 of 3
% of Buy by Vendor: 100%
Vendor 2 of 3
% of Buy by Vendor: 0%
Vendor 3 of 3
% of Buy by Vendor: 0%

Prior Qty by Vendor:
Vendor 1 of 3%
Vendor 2 of 3%
Vendor 3 of 3%

Cost: $13660

Component 2 of 9

Procurement Fact: 4%
Component Not Shared
Vendor 1 of 3
% of Buy by Vendor: 50%
Vendor 2 of 3
% of Buy by Vendor: 50%
Vendor 3 of 3
% of Buy by Vendor: 0%

Prior Qty by Vendor:
Vendor 1 of 3%
Vendor 2 of 3%
Vendor 3 of 3%

Cost: $4'

Component 3 of 9

Procurement Fact: 4%
Component Not Shared
Vendor 1 of 3
% of Buy by Vendor: 50%
Vendor 2 of 3
% of Buy by Vendor: 50%
Vendor 3 of 3
% of Buy by Vendor: 0%

Prior Qty by Vendor:
Vendor 1 of 3%
Vendor 2 of 3%
Vendor 3 of 3%

Cost: $86.26

Component 4 of 9

Procurement Fact: 5%
Shared Design: 1
Vendor 1 of 3
% of Buy by Vendor: 50%
Vendor 2 of 3
% of Buy by Vendor: 50%
Vendor 3 of 3
% of Buy by Vendor: 0%

Prior Qty by Vendor:
Vendor 1 of 3%
Vendor 2 of 3%
Vendor 3 of 3%

Cost: $2409.88

Component 5 of 9

Procurement Fact: 4%
Component Not Shared
Vendor 1 of 3
% of Buy by Vendor: 50%
Vendor 2 of 3
% of Buy by Vendor: 50%
Vendor 3 of 3
% of Buy by Vendor: 0%

Prior Qty by Vendor:
Vendor 1 of 3%
Vendor 2 of 3%
Vendor 3 of 3%

Cost: $2409.88

Component 6 of 9

Procurement Fact: 2%
Shared Design: 2
Vendor 1 of 3
% of Buy by Vendor: 50%
Vendor 2 of 3
% of Buy by Vendor: 50%
Vendor 3 of 3
% of Buy by Vendor: 0%

Prior Qty by Vendor:
Vendor 1 of 3%
Vendor 2 of 3%
Vendor 3 of 3%

Cost: $354.01

Component 7 of 9

Procurement Fact: 3%
Component Not Shared
Vendor 1 of 3
% of Buy by Vendor: 50%
Vendor 2 of 3
% of Buy by Vendor: 50%
Vendor 3 of 3
% of Buy by Vendor: 0%

Prior Qty by Vendor:
Vendor 1 of 3%
Vendor 2 of 3%
Vendor 3 of 3%

Cost: $170.14

Component 8 of 9

Procurement Fact: 2%
Component Not Shared
Vendor 1 of 3
% of Buy by Vendor: 50%
Vendor 2 of 3
% of Buy by Vendor: 50%
Vendor 3 of 3
% of Buy by Vendor: 0%

Prior Qty by Vendor:
Vendor 1 of 3%
Vendor 2 of 3%
Vendor 3 of 3%

Cost: $6.61
PROCUREMENT FACT. 5 %

PACKAGING
COMPONENT 9 OF 9
PROCUREMENT FACT. 3 %
SHARED DESIG. 3 1st UC=$ 143.94
VENDOR 1 OF 3
% OF BUY BY VENDOR 50 %
VENDOR 2 OF 3
% OF BUY BY VENDOR 50 %
VENDOR 3 OF 3
% OF BUY BY VENDOR 0 %

COMP. UC=$ 1.14

LEARNING= 90 %

PRIOR QTY BY VENDOR 22819.65

PRIOR QTY BY VENDOR 22819.65

PRIOR QTY BY VENDOR 0
<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>QTY.</th>
<th>UNIT COST</th>
<th>COST</th>
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<tbody>
<tr>
<td>LAP</td>
<td>48352</td>
<td>$ 51.78</td>
<td>$ 2503711.77</td>
</tr>
<tr>
<td>MPTS</td>
<td>48822</td>
<td>$ 240.87</td>
<td>$ 11759466.42</td>
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<td>CORE</td>
<td>48822</td>
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<td>$ 26854137.67</td>
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<tr>
<td>CRTG CASE</td>
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<tr>
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<td>C BASE &amp; SEAL</td>
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TOTAL HARDWARE COST, $ 54803477.83

P&A COST, $ 242985.00

QA COST, $ 13660.00

ESIP COST, $ 2192139.11

TOTAL BUY COST, $ 57252261.94

ROUND UNIT COST, $ 1396.40

ESCALATED TO CONSTANT FY 1984.00 DOLLARS BY FACTOR OF 1.18
<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>QTY.</th>
<th>UNIT COST</th>
<th>COST</th>
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**TOTAL HARDWARE COST**

$ 64772230.44

P&A COST

$ 287183.97

QA COST

$ 16144.75

ESIP COST

$ 2590889.22

**TOTAL BUY COST**

$ 67666448.39

ROUND UNIT COST, $ 1650.48

ESCALATED TO THEN YR DOLLARS BY FACTOR OF 1.24
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<tr>
<td><strong>ROUND UNIT COST, $ 1727.20</strong></td>
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</table>
10 OPTION BASE 1
20 PRINTER IS 16
30 PRINT "YR PROGRAM"
40 STANDARD
50 DIM Rnd$(8),(5),Byqt(8),Prqt(8),Rfqt(8),Paqt(0),Yr(25)
60 DIM Past(0),Qast(0),Ess(0),U(0),Ba(0,10),Vt(0,10,3),Vp(0,10)
70 DIM Cmp$(8,0,10),Pr(0,10),Uccmp(8,0,10),Cmps(8,10),Luc(0,10)
80 DIM Vpqt(8,10,3),Vct(8,10,3),B(8,10),L(8,10),V(8,10)
90 INPUT "ENTER NUMBER OF YEARS CONSIDERED",Sy
100 FOR T=1 TO Sy
110 INPUT "ESCALATION TO CONSTANT YR & REO? YES ? ENTER YEAR. NO ? ENTER 0.",Yrc
120 IF Yrc=0 THEN 130
130 INPUT "ENTER ESCALATION FACTOR.",Esc(1)
140 FOR T=1 TO Sy
150 INPUT "ENTER 1st YEAR CONSIDEREDYrs",Yrs
160 PRINT "YR","YEAR","T","OF","SY","L(I)
170 INPUT "ESCALATION TO THEN YR & REO? YES ? ENTER FACTOR. NO ? ENTER 0.",E
sc(2)
180 IF T=1 THEN 240
190 INPUT "ENTER NUMBER OF ROUNDS CONSIDERED.",W
200 FOR x=1 TO W
210 IF T>1 THEN 240
220 INPUT "ENTER ROUND DESIGNATION.",Rnd$(x)
230 Prqt(x)=Byqt(x)+Prqt(x)
240 PRINT Rnd$(x)
250 INPUT "ENTER NUMBER OF COMPEHENTS.",U(x)
260 FOR Y=1 TO U(x)
270 IF Prqt(X)=0 THEN 200
280 IF T>1 THEN 240
290 INPUT "ENTER COMPONENT NAME.",Cmp$(X,Y)
300 PRINT Cmp$(X,Y),"COMPONENT ";Y;"OF ";U(X)
310 INPUT "ENTER PROCUREMENT FACTOR",Pr(X,Y)
320 L(X,Y)=Byqt(X)+Rfqt(X)+Paqt(X)+Pr(X,Y)*(1+0.01*Pr(X,Y))
330 INPUT "ENTER COMPONENT UNIT COST,ENTER 0 IF UNKNOWN",Uccmp(X,Y)
340 IF Uccmp(X,Y)=0 THEN 730
350 INPUT "OTHER RND.SHARE COMPONENT? NO=0,IF YES ENTER SHARED DESIG",Cmps(X,Y)
360 IF Cmps(X,Y)=0 THEN 730
370 INPUT "ENTER THE NUMBER OF COMPEHENTS.",U(X)
380 FOR Y=1 TO U(X)
390 IF Prqt(X)=0 THEN 520
400 IF T>1 THEN 530
410 INPUT "ENTER COMPONENT NAME.",Cmp$(X,Y)
420 PRINT Cmp$(X,Y),"COMPONENT ";Y;"OF ";U(X)
430 INPUT "ENTER PROCUREMENT FACTOR",Pr(X,Y)
440 L(X,Y)=Byqt(X)+Rfqt(X)+Paqt(X)+Pr(X,Y)*(1+0.01*Pr(X,Y))
450 INPUT "ENTER COMPONENT UNIT COST,ENTER 0 IF UNKNOWN",Uccmp(X,Y)
460 IF Uccmp(X,Y)=0 THEN 730
470 INPUT "OTHER RND.SHARE COMPONENT? NO=0,IF YES ENTER SHARED DESIG",Cmps(X,Y)
480 IF Cmps(X,Y)=0 THEN 730
490 IF T>1 THEN 330
500 PRINT "ARE INPUTS CORRECT? 1=YES,0=NO",Ans
510 IF Ans<>1 THEN 200
520 IF Prqt(X)=0 THEN 480
530 IF T>1 THEN 490
540 FOR Y=1 TO U(X)
550 IF Prqt(X)=0 THEN 520
560 IF T>1 THEN 530
570 INPUT "ENTER COMPONENT NAME.",Cmp$(X,Y)
580 PRINT Cmp$(X,Y),"COMPONENT ";Y;"OF ";U(X)
590 INPUT "ENTER PROCUREMENT FACTOR",Pr(X,Y)
600 L(X,Y)=Byqt(X)+Rfqt(X)+Paqt(X)+Pr(X,Y)*(1+0.01*Pr(X,Y))
610 INPUT "ENTER COMPONENT UNIT COST,ENTER 0 IF UNKNOWN",Uccmp(X,Y)
620 IF Uccmp(X,Y)=0 THEN 730
630 PRINT "OTHER RND.SHARE COMPONENT? NO=0,IF YES ENTER SHARED DESIG",Cmps(X,Y)
640 IF Cmps(X,Y)=0 THEN 730
650 IF T>1 THEN 330
660 PRINT "INPUT "YE 16"
S=Cmps(X,Y)
X=X-1
IF X=0 THEN 670
IF Byqt(X)=0 THEN 630
GOTO 2520
X=F
Y=G
INPUT "ENTER 1ST. UNIT COST",Iuc(X,Y)
INPUT "ENTER % LEARNING.",Ba(X,Y)
B(X,Y)=(-2+LGT(Ba(X,Y)))LGT(2)
PRINT "PROCUREMENT FACT.";Prqt(X,Y);"%.";Uccmp(X,Y)
IF Uccmp(X,Y)>0 THEN 790
PRINT "COMPONENT COMMON";Cmps(X,Y);"1st UC=";Iuc(X,Y);"LEARN.";Ba(X,Y);"%"
LINF(1)
GOTO 790
PRINT "COMPONENT USED IN COMMON WITH PRIOR ROUND".
Vp(X,Y)=1
INPUT "ARE THE INPUTS CORRECT ? 1=YES,0=NO",Ans
IF Ans=0 THEN 520
IF Vp(X,Y)=1 THEN 1000
IF Uccmp(X,Y)>0 THEN 1000
FOR Z=1 TO 3
IF Z<>1 THEN 870
INPUT "VENDOR No1 TO MFG. WHAT % OF BUY?",Vt(X,Y,Z)
GOTO 910
IF Z<>2 THEN 900
IF Z<>3 THEN 870
PRINT "COMPONENT USED IN COMMON WITH PRIOR ROUND".
Vp(X,Y)=1
INPUT "ARE THE INPUTS CORRECT ? 1=YES,0=NO",Ans
IF Ans=0 THEN 630
PRINT
GOSUB 2160
NEXT Y
GOTO 1658
NEXT X
F=N
G=Y
SUCmp(X,Y)
X=N-1
1080 PRINT "ENTER 1ST. UNIT COST",Iuc(X,Y)
1090 INPUT "ENTER % LEARNING.",Ba(X,Y)
INPUT "ENTER 1ST. UNIT COST",Iuc(X,Y)
INPUT "ENTER % LEARNING.",Ba(X,Y)
B(X,Y)=(-2+LGT(Ba(X,Y)))LGT(2)
PRINT "PROCUREMENT FACT.";Prqt(X,Y);"%.";Uccmp(X,Y)
IF Uccmp(X,Y)>0 THEN 790
PRINT "COMPONENT COMMON";Cmps(X,Y);"1st UC=";Iuc(X,Y);"LEARN.";Ba(X,Y);"%"
LINF(1)
GOTO 790
PRINT "COMPONENT USED IN COMMON WITH PRIOR ROUND".
Vp(X,Y)=1
INPUT "ARE THE INPUTS CORRECT ? 1=YES,0=NO",Ans
IF Ans=0 THEN 520
IF Vp(X,Y)=1 THEN 1000
IF Uccmp(X,Y)>0 THEN 1000
FOR Z=1 TO 3
IF Z<>1 THEN 870
INPUT "VENDOR No1 TO MFG. WHAT % OF BUY?",Vt(X,Y,Z)
GOTO 910
IF Z<>2 THEN 900
IF Z<>3 THEN 870
PRINT "COMPONENT USED IN COMMON WITH PRIOR ROUND".
Vp(X,Y)=1
INPUT "ARE THE INPUTS CORRECT ? 1=YES,0=NO",Ans
IF Ans=0 THEN 630
PRINT
GOSUB 2160
NEXT Y
GOTO 1658
NEXT X
F=N
G=Y
SUCmp(X,Y)
X=N-1
1260 IF X>W THEN 1350
1270 IF Byqt(X)>0 THEN 1250
1280 Y=1
1290 IF S=Caps(X,Y) THEN 1330
1300 Y=Y+1
1310 IF Y=W THEN 1220
1320 FOR Z=1 TO 3
1330 IF Vct(X,Y,Z)=0 THEN 1450
1340 Lc=Lc+Vct(X,Y,Z)
1350 NEXT Z
1360 Uccap(X,Y)+Uc
1370 GO TO 1120
1380 IF X>W THEN 1410
1390 IF Byqt(X)=S THEN 1430
1400 IF S=Caps(X,Y) THEN 1490
1410 IF Y>U(X) THEN 1420
1420 Lc=Lc+L(X,Y)+Lc
1430 Uc=0
1440 FOR Z=1 TO 3
1450 IF Vct(X,Y,Z)=0 THEN 1450
1460 Lc=Lc+Vct(X,Y,Z)
1470 NEXT Z
1480 IF X>W THEN 1520
1500 IF Byqt(X)=S THEN 1520
1510 IF Y>U(X) THEN 1520
1520 Lc=Lc+L(X,Y)+Lc
1530 X=F
1540 Y=G
1550 GOTO 1190
1560 FOR X=1 TO W
1570 IF Byqt(X)=0 THEN 1750
1580 Hwst(X)=0
1590 FOR Y=1 TO U(X)
1600 Hwst(X)=Hwst(X)+Cps(1,X,Y)
1610 NEXT Y
1620 IF Ess(X)>100 THEN 1730
1630 Ess(X)=Ess(X)+U(X)
1640 NEXT X
1650 IF X=1 THEN 1680
1660 IF Byqt(X)>0 THEN 1750
1670 Rdst(X)=Rdst(X)+Ess(X)
1680 FOR Y=1 TO U(X)
1690 Rdst(X)=Rdst(X)+Rdst(X)+Ess(X)
1700 NEXT Y
1710 IF Ess(X)>100 THEN 1730
1720 Ess(X)=Ess(X)+U(X)
1730 Rdst(X)=Rdst(X)+Ess(X)
1740 Rdst(X)=Rdst(X)+Ess(X)
1750 NEXT X
1760 FIXED 2
1770 PRINTER IS 0
1780 PRINT "HERE IS NO BUY OF \";Rnd$(X);\" IN YEAR \";Yrs
1790 PRINT "REFERENCE QUANTITY,-,Rfqt(X),LIN(1)
1800 PRINT "COMPONENT","UNIT COST","COST"
1926 PRINT
1930 FOR Y=1 TO U(X)
1940 PRINT USING 1900; Cmp$(X,Y),L(X,Y),Uccmp(X,Y),Cpst(X,Y)
1950 PRINT
1960 NEXT Y
1970 IMAGE 28A34X"0",10D.2D
1980 PRINT TAB(57), "--------
1990 PRINT USING 1970; "TOTAL HARDWARE COST","Hst(X)
2000 PRINT
2010 PRINT USING 1970; "PLA COST","Pst(X)
2020 PRINT
2030 PRINT USING 1970; "QA COST","Qast(X)
2040 PRINT
2050 PRINT USING 1970; "ESIP COST","Esst(X)
2060 PRINT USING 1970; "TOTAL BUY COST","Rdst(X)
2070 PRINT
2080 FIXED 2
2090 PRINT "ROUND UNIT COST,";"X";"Rst(X)
2100 IF Yrc<>8 THEN 2790
2110 IF Esc(2)<>S THEN 2813
2120 NEXT X
2130 NEXT T
2140 STOP
2150 PRINTER IS 8
2160 PRINT PAGE, TAB(35), "INPUT DATA", LIN(1)
2170 STANDARD
2180 PRINT "ROUND \"(Rnd#(X),"BUY YEAR\";Yrs,LIN(1)
2190 IF Byqt(X)=0 THEN 2220
2200 GOTO 2240
2210 PRINT "THERE IS NO BUY OF \";"Rnd#(X);\" THIS YEAR."
2220 GOTO 2240
2230 GOTO 2440
2240 PRINT "BUY QTY\";"Buqt(X),"PRIOR BUY QTY\";"Prqt(X)
2250 PRINT "REF QTY\";"Rfqt(X),"PLA QTY\";"Paqt(X)
2260 IF Est(X)<100 THEN 2290
2270 PRINT "PLA COST\";"Pst(X),"QA COST\";"Qast(X),"ESIP COST\";"Esst(X)
2280 IF Byqt(X)=e THEN 2290
2290 GOTO 2386
2300 PRINT "COMPONENT NOT SHARED \";"Iuc(X,Y),"LEARNING\";"Ba(X,Y)
2310 FOR Z=1 TO 3
2320 PRINT "VENDOR\";Z;OF 3
2330 PRINT "COMPONENT NOT SHARED \";"Iuc(X,Y),"LEARNING\";"Ba(X,Y)
2340 FOR Z=1 TO 3
2350 PRINT "VENDOR\";Z;OF 3
2360 PRINT "COMPONENT NOT SHARED WITH PRIOR ROUND)
2370 GOTO 2430
2380 GOTO 2390
2390 PRINT "COMPONENT NOT SHARED 1ST UC\";"Iuc(X,Y),"LEARNING\";"Ba(X,Y)
2400 FOR Z=1 TO 3
2410 GOTO 2470
2420 PRINT "COMPONENT NOT SHARED \";"Iuc(X,Y),"LEARNING\";"Ba(X,Y)
2430 FOR Z=1 TO 3
2440 PRINT "VENDOR\";Z;OF 3
2450 PRINT "% OF BUY BY VENDOR\";Vt(X,Y,Z);"%",PRIOR QTY BY VENDOP\";Vpq(X,Y,Z)
2460 NEXT Z
2470 NEXT Y
2480 PRINTER IS 16
2490 PRINT "ARE ROUND DATA INPUTS OK? 1=YES 0=NO", Ans
2500 IF Ans=0 THEN 298
2510 RETURN
2520 Y=1
2530 IF U(X)=u THEN 2570
2540 IF Y=u(X) THEN 630
2558 X=Y+1
2560 GOTO 2530
2570 X=F
2580 Y=G
2590 GOTO 2770
2600 F=X
2610 G=Y
2620 S=Caps(X,Y)
2630 X=X+1
2640 IF X>W THEN 2770
2650 Y=1
2660 IF Caps(X,Y)>S THEN 2770
2670 Y=Y+1
2680 IF Y>U(X) THEN 2630
2690 GOTO 2660
2700 Rz=Vpqt(X,Y,1)
2710 Bz=Vpqt(X,Y,2)
2720 Cz=Vpqt(X,Y,3)
2730 X=F
2740 Y=G
2750 Vpqt(X,Y,1)=Rz
2760 Vpqt(X,Y,2)=Bz
2770 Vpqt(X,Y,3)=Cz
2780 GOTO 2790
2790 PRINT "ESCALATED TO CONSTANT FY ";Yrc;" DOLLARS BY FACTOR OF ";Esc(1)
2800 PRINT
2810 E=Esc(1)
2820 GOSUB 2620
2830 IF Esc(2)=0 THEN 2130
2840 E=Esc(2)
2850 PRINT
2860 PRINT "ESCALATED TO THEN YR DOLLARS BY FACTOR OF ";E
2870 PRINT
2880 GOSUB 2620
2890 PRINT
2900 GOTO 2130
2910 PRINT "COMPONENT", " QTY.", " UNIT COST", "COST"
2920 PRINT
2930 PRINT
2940 Hw=0
2950 FOR Y=1 TO U(X)
2960 Uc=Ucmp(X,Y)*E
2970 Cp=Cps(X,Y)*E
2980 PRINT USING 1900;Cmp$(X,Y),L$(X,Y),Uc,P,E
2990 PRINT
3000 Hw=Hw+Cp
3010 NEXT Y
3020 PRINT TAB(57), "--------
3030 PRINT USING 1970; "TOTAL HARDWARE COST", Hw
3040 PRINT
3050 Pa=Past(X)*E
3060 PRINT USING 1970; "P&A COST", Pa
3070 PRINT
3080 Qa=Qast(X)*E
3090 PRINT USING 1970; "QA COST", Qa
3100 Es=Estat(X)*E
3110 PRINT
3120 PRINT USING 1970; "ESIP COST", Es
3130 Tot=Hw+Pa+Qa+Es
3140 PRINT TAB(57), "--------
3150 PRINT USING 1970; "TOTAL BUY COST", Tot
3160 Avg=Tot/6(Vqt(K))
3170 PRINT
3180 PRINT "ROUND UNIT COST, ";Avg
3190 RETURN
3200 END
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