Tech Info Library

Applesoft BASIC: Right-justifying columns of numbers

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Security:       Everyone
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Applesoft BASIC: Right-justifying columns of numbers

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Many users want their Applesoft BASIC codes to print a right-justified column
of numerals with the same number of decimal places, usually two. Beginning at
line 1000, the subroutine in this sample program formats the numerals of the
string variable X$ before line 140 prints it. To specify the format, line
1020 assigns a decimal value to the numeric variable F.   The value 8.2
specifies a format of 2 decimal places and 8 total characters (digits, decimal
point, sign, and leading spaces). The subroutine rounds the number in X to the
desired number of decimal places indicated by the number to the right of the
decimal point in F. Then the subroutine pads X$ with spaces until the string
is the length indicated by the number to the left of the decimal point.

```
100   HOME: PRINT "NORMAL","FORMATTED"
110   FOR I = 1 TO 5
120   READ X: PRINT X,
130   GOSUB 1000
140   PRINT X$
150   NEXT I
200   DATA  1,-3,.2,17,450
300   END
1000  REM  PRINT FORMATTING
1010  REM
1020  F = 8.2: REM  FORMAT CONTROL
1030  TC =  INT (F): REM  TOTAL CHARACTERS
1040  DP =  VAL ( RIGHT$ ( STR$ (F),1)): REM  DECIMAL PLACES
1050  X =  INT (10 ^ DP * X + .5) / (10 ^ DP)
1060  X$ =  STR$ (X)
1070  FOR JJ = 1 TO  LEN (X$)
1080  IF  MID$ (X$,JJ,1) = "." THEN 1110: REM LOOK FOR .
1090  NEXT JJ
1100  X$ = X$ + "."
1110  IF ( LEN (X$) - JJ) < DP THEN X$ = X$ + "0": GOTO 1110
1120  IF  LEN (X$) < TC THEN X$ = " " + X$: GOTO 1120
1200  RETURN
```

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