TI-80

Simple Interest Program

This program can be used to find the amount of simple interest earned on a given principal at a given annual interest rate for a certain amount of time.

```
PROGRAM:SIMPINT
:FIX 2
:DISP "PRINCIPAL"
:INPUT P
:DISP "INTEREST RATE"
:DISP "IN DECIMAL FORM"
:INPUT R
:DISP "NUMBER OF YEARS"
:INPUT T
:PRT→I
:DISP "THE INTEREST IS"
:DISP I
:FLOAT
```

Quadratic Formula Program

This program will display the solutions of a quadratic equation or the words "No Real Solution." To use the program, write the quadratic equation in general form and enter the values of *a*, *b*, and *c*.

```
PROGRAM:QUADRAT
:DISP "AX²+BX+C=0"
:INPUT "ENTER A",A
:INPUT "ENTER B",B
:INPUT "ENTER C",C
:B²−4AC→D
:IF D≥0
:THEN
:(-B+√(D)/(2A)→M
:DISP M
:(-B−√(D)/(2A)→N
:DISP N
:ELSE
:DISP "NO REAL SOLUTION"
:END
```

Two-Point Form of a Line

This program will display the slope and *y*-intercept of the line that passes through two points, (x_1, y_1) and (x_2, y_2), entered by the user.

```
PROGRAM:TWOPTFM
:DISP "ENTER X1, Y1"
:INPUT X
:INPUT Y
:DISP "ENTER X2, Y2"
:INPUT C
:INPUT D
:(D−Y)/(C−X)→M
:M×(-X)+Y→B
:DISP "SLOPE ="
:DISP M
:DISP "Y-INT ="
:DISP B
```

Systems of Linear Equations Program

This program will display the solution of a system of two linear equations in two variables of the form

$$ax + by = c$$

$$dx + ey = f$$

if a unique solution exists.

```
PROGRAM:SOLVE
:DISP "AX+BY=C"
:INPUT "ENTER A",A
:INPUT "ENTER B",B
:INPUT "ENTER C",C
:DISP "DX+EY=F"
:INPUT "ENTER D",D
:INPUT "ENTER E",E
:INPUT "ENTER F",F
:IF AE−DB=0
:THEN
:DISP "NO UNIQUE"
:DISP "SOLUTION"
:ELSE
:(CE−BF)/(AE−DB)→X
:(AF−CD)/(AE−DB)→Y
:DISP X
:DISP Y
:END
```